HCD-RX80

SERVICE MANUAL

AEP Model
UK Model

HCD-RX80 is the tuner, deck, CD and amplifier section in MHC-RX80.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing corporation.
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CD Section	Model Name Using Similar Mechanism	HCD-RX70
	CD Mechanism Type	CDM38L-5BD29AL
	Base Unit Name	BU-5BD29AL
	Optical Pick-up Name	KSS-213D/Q-NP
Tape deck Section	Model Name Using Similar Mechanism	HCD-H881
	Tape Transport Mechanism Type	TCM-220WR2

SPECIFICATIONS

Amplifier section

DIN power output: 40 + 40 watts (6 ohms, at 1 kHz, DIN)
Continuous RMS power output: 55 + 55 watts (6 ohms at 1 kHz, 10 % THD)
Music power output: 95 + 95 watts (6 ohms at 1 kHz, 10% THD)
Inputs: VIDEO/MD IN (phono jacks): voltage 250 mV, impedance 47 kilohms
MIX MIC (phone jack): sensitivity 1 mV, impedance 10 kilohms
Outputs: VIDEO/MD OUT (phono jacks): voltage 250 mV, impedance 1 kilohms
PHONES (stereo phone jack): accepts head phones of 8 ohms or more.
SPEAKER: accepts impedance of 8 to 16 ohms.
SURROUND SPEAKER accepts impedance of 16 ohms.

CD Player section

System: Compact disc and digital audio system
Laser: Semiconductor laser (λ =780 nm)
Emission duration: continuous
Laser output: Max. 44.6 µW*
* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response: 2 Hz – 20 kHz (± 0.5 dB)
Wavelength: 780 – 790 nm
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB
CD OPTICAL DIGITAL OUT
(Square optical connector jack, rear panel)
Wavelength: 600 nm
Output Level: – 18 dBm

Tape player section

Recording system: 4-track 2-channel stereo
Frequency response (DOLBY NR OFF): 60 – 13,000 Hz (± 3 dB), using Sony TYPE I cassette
60 – 14,000 Hz (± 3dB), using Sony TYPE II cassette
Wow and flutter: ± 0.15% W. Peak (IEC)
0.1% W. RMS (NAB)
± 0.2 % W. Peak (DIN)

– Continued on next page –

MINI Hi-Fi COMPONENT SYSTEM

MICROFILM

SONY®

Tuner section
FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	
AEP, UK, G, AED:	87.5 – l08.0 MHz (50 kHz step)
EE, CIS:	65.0 – 74.0 MHz (10 kHz step) 87.5 – 108.0 MHz (50 kHz step)
Aerial	FM Lead aerial
Aerial terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz

UKV tuner section (EE, CIS)

Tuning range	65.0 – 74.0 MHz (10 kHz step) Polar Stereo

AM tuner section

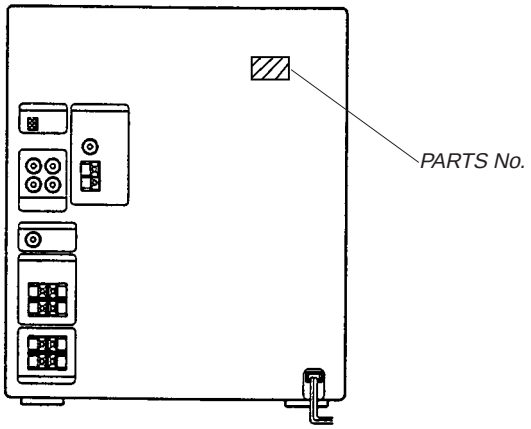
Tuning range	MW: 531 – 1,602 kHz (with interval set at 9 kHz) LW: 153 – 279 kHz (with interval set at 3 kHz)
Aerial	AM loop aerial External aerial terminal
Intermediate frequency	450 kHz

General

Power requirements	220 – 230 V AC, 50/60 Hz
Power consumption	130 watts
Dimension (w/h/d)	Approx. 280 × 330 × 366 mm
Mass	Approx. 8.1 kg
Supplied accessories:	AM loop aerial (1) Remote RM-SD70 (1) Sony SUM-3 (NS) batteries (2) FM lead aerial (1) Speaker cords (4)

Design and specifications are subject to change without notice.

MODEL IDENTIFICATION
– BACK PANEL –



MODEL	PARTS NO.
AEP, UK, G, AED model	4-986-844-5☐
EE, CIS model	4-986-844-6☐

- Abbreviation
  AED : Northern European model
  G : German model
  EE : East European model

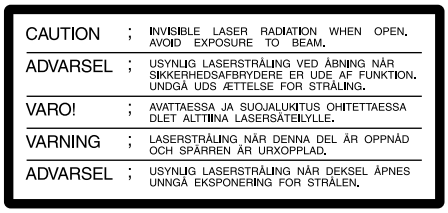
CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.


CAUTION ; INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL ; USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARO! ; AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTTIINA LASERSÄTEILYLLE.
VARNING ; LASERSTRÅLING NÄR DENNA DEL ÄR OPPNÅD OCH SPÄRREN ÄR URXOPPLAD.
ADVARSEL ; USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

Servicing Notes 4

1. GENERAL 5

2. DISASSEMBLY 22

3. TEST MODE 28

4. MECHANICAL ADJUSTMENTS 30

5. ELECTRICAL ADJUSTMENTS

Deck Section 30
Tuner Section 33
CD Section 35

6. DIAGRAMS

6-1. Printed Wiring Board –TUNER Section– 38
6-2. Schematic Diagram –TUNER Section– 40
6-3. Printed Wiring Board –CD Section– 43
6-4. Schematic Diagram –CD Section– 45
6-5. Printed Wiring Boards –CD MOTOR Section– 47
6-6. Schematic Diagram –CD MOTOR Section– 49
6-7. Printed Wiring Boards –DECK Section– 51
6-8. Schematic Diagram –DECK Section– 53
6-9. Schematic Diagram –MAIN/POWER Section– 57
6-10. Printed Wiring Boards –MAIN/POWER Section– 61
6-11. Schematic Diagram –PANEL Section– 65
6-12. Printed Wiring Boards –PANEL Section– 69
6-13. Printed Wiring Board –POWER AMP Section– 73
6-14. Schematic Diagram –POWER AMP Section– 74
6-15. IC Pin Function Description 82

7. EXPLODED VIEWS 86

8. ELECTRICAL PARTS LIST 94

SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on chip component replacement

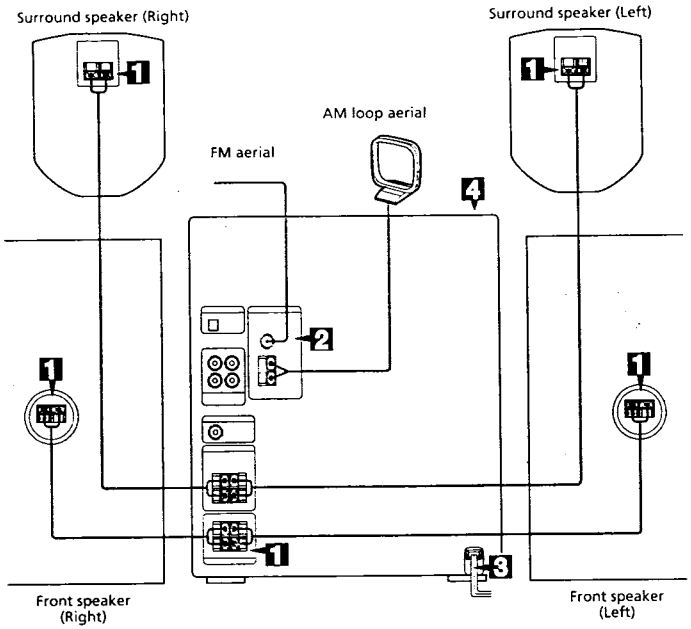
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

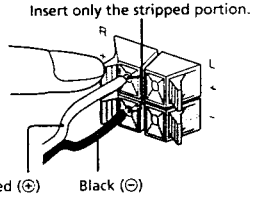
Step 1: Hooking up the system

Do the following procedure 1 to 5 to hook up your system using the supplied cords and accessories.



1 Connect the speakers.

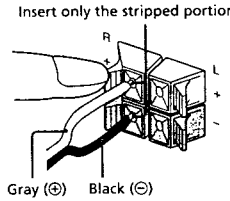
1 Connect the speaker cords of front speakers to the SPEAKER jacks of the same colour .
Keep the speaker cords away from the aerials to prevent noise.



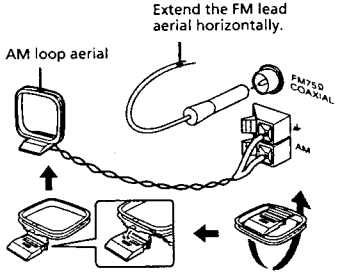
2 Connect the speaker cords of surround speakers to the SURROUND SPEAKER jacks of the same colour .
Keep the speaker cords away from the aerials to prevent noise.

Note

Do not place the surround speakers on top of a TV. This may cause distortion of the colours in the TV screen.



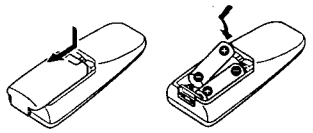
2 Connect the FM/AM aerials.
Set up the AM loop aerial, then connect it.



3 Connect the power cord to a wall outlet.
Demo mode appears in the display.

4 Deactivate the demo mode by pressing DISPLAY/DEMO when the system power is turned off.
The demo mode is also deactivated when you set the time.

Inserting two size AA (R6) batteries into the remote



Tip

With normal use, the batteries should last for about six months. When the remote no longer operates the system, replace both batteries with new ones.

Note

If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage.

When carrying this system

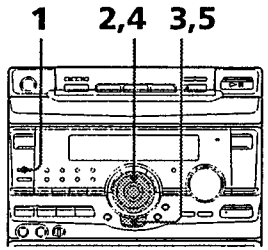
Do the following to protect the CD mechanism.

1 Press FUNCTION repeatedly until "CD" appears in the display.
2 Hold down PLAY MODE and press POWER to turn off the power.

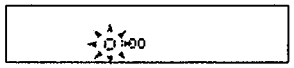
This section is extracted from instruction manual.

Step 2: Setting the time

You must set the time before using the timer functions.

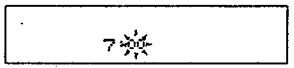


1 Press CLOCK TIMER SET.
The hour indication flashes.



2 Turn the jog dial to set the hour.
The clock is on a 12-hour system.

3 Press ENTER/NEXT.
The minute indication flashes.



4 Turn the jog dial to set the minute.

5 Press ENTER/NEXT.
The clock starts working.

Tips

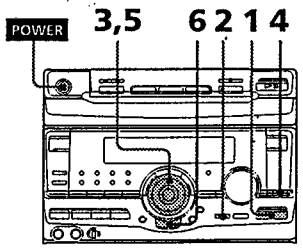
- If you've made a mistake, start over from step 1.
- Setting the time deactivates the demo mode. If you want to display the demo mode, press DISPLAY/DEMO when the power is off.

Note

When setting the time, set the equalizer display to anything other than Spectrum analyzer pattern 3. (See "To change the equalizer display" on page 30.)

Step 3: Presetting radio stations

The 3 band model lets you preset up to 40 stations, 20 for FM, 10 for MW and 10 for LW. The 4 band model lets you preset up to 45 stations, 20 for FM, 10 for MW, 10 for LW and 5 for UKV.

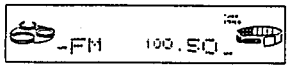


1 Press TUNER/BAND repeatedly until the band you want appears in the display.
the bands you can recieve vary depending on the model you purchased. Be sure to check which bands you can recieve.
Every time you press this button, the band changes as follows:
3 band models:
FM → MW → LW
4 band model:
FM → MW → LW → UKV*

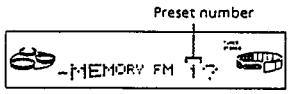
* "STEREO PLUS" is displayed when you select UKV.

2 Press TUNING MODE repeatedly to select "AUTO".

3 Turn the jog dial.
The frequency indication changes and scanning stops when the system tunes in a station. "TUNED" and "STEREO" (for a stereo programme) appear.



4 Press TUNER MEMORY.
A preset number appears in the display.



5 Turn the jog dial to select the preset number you want.

6 Press ENTER/NEXT.
The station is stored.

7 Repeat steps 1 to 6 to store other stations.

To tune in a station with a weak signal

Press TUNING MODE repeatedly to select "MANUAL" in step 2, then turn the jog dial to tune in the station.

To change the preset number

Start over from step 1.

Tip

The preset stations are retained for half a day even if you unplug the power cord or if a power failure occurs.

Connecting optional AV components

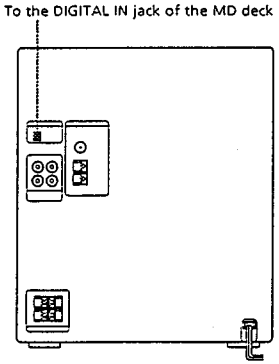
To enhance your system, you can connect optional components. Refer to the instructions of each component.

Connecting audio components

Select one of the following two connections, depending on the equipment to be connected and method of connecting.

Connecting an MD deck for digital recording

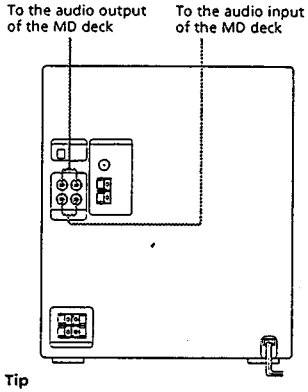
You can record from CD into the MD deck digitally by connecting an optical cable.



continued

Connecting an MD deck for analog recording

Make sure to match the colour of the plugs and the connectors. To listen to the sound of the connected MD deck, press FUNCTION repeatedly until "MD" appears.



Tip

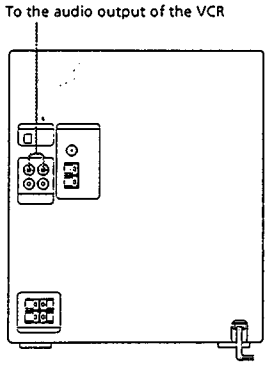
If you connect a turntable with MM cartridge, connect it to VIDEO/MD IN using the optional MM cartridge equalizer EQ-2 and an audio connecting cord. To listen to the sound, press FUNCTION repeatedly until "VIDEO" appears.

Notes

- You need to connect both left and right surround speakers. Otherwise, the sound will not be heard (MHC-RX80 only).
- If you cannot select "MD" even when you have pressed FUNCTION, press POWER while pressing FUNCTION when the power is turned off. "VIDEO" will be switched to "MD". To return to "VIDEO" do the same procedure.

Connecting a VCR

Make sure to match the color of the plugs and the connectors. To listen to the sound of the connected VCR, press FUNCTION repeatedly until "VIDEO" appears.



Note

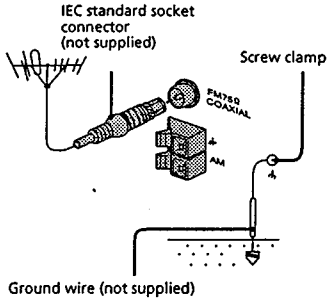
If the sound is distorted when selecting "VIDEO", switch to "MD" (see previous "Notes).

Connecting outdoor aerials

Connect the outdoor aerial to improve the reception.

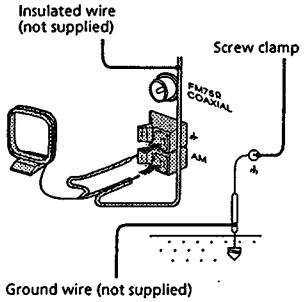
FM aerial

Connect the optional FM outdoor aerial. You can also use the TV aerial instead.



AM aerial

Connect a 6- to 15- meter (20- to 50- feet) insulated wire to the AM aerial terminal. Leave the supplied AM loop aerial connected.



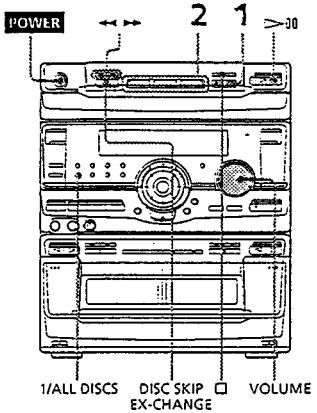
Important

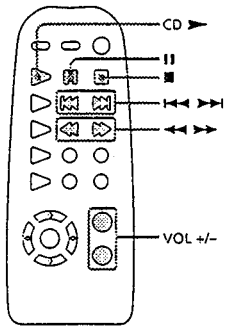
If you connect an outdoor aerial, ground from ⏚ terminal with the screw clamp. To prevent a gas explosion, do not connect the ground wire to a gas pipe.

Playing a CD

— Normal play

You can play up to three CDs in a row.

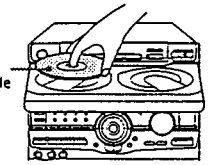




1 Press ⏏ OPEN/CLOSE and place up to two CDs on the disc tray.

If a disc is not placed properly it will not be recognized.

With the label side up. When you play a single CD, place it on the inner circle of the tray.

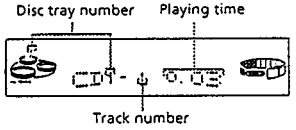


To insert a third disc, press DISC SKIP EX-CHANGE to rotate the disc tray.

2 Press one of the DISC 1–3 buttons.

The disc tray closes and play starts.

If you press ▷II (or ▷ on the remote) when the disc tray is closed, play starts from the CD loaded on the tray whose button is lit green.



To	Do this
Stop play	Press □ (■ on the remote).
Pause	Press ▷II (II on the remote). Press again to resume play.
Select a track	During play or pause, turn the jog dial clockwise (to go forward) or counterclockwise (to go back) and release it when you reach the desired track. Or press ▶▶I (to go forward) or I◀◀ (to go back) on the remote.
Find a point in a track	Press and hold down ▶▶ or ◀◀ (or ▶▶/◀◀ on the remote) during play and release it at the desired point.
Select a CD in stop mode	Press a DISC 1–3 button or DISC SKIP EX-CHANGE.
Play only the CD you have selected	Press 1/ALL DISCS repeatedly until "1 DISC" appears.
Play all CDs	Press 1/ALL DISCS repeatedly until "ALL DISCS" appears.
Remove the CD	Press ⏏ OPEN/CLOSE.
Exchange other CDs while playing	Press DISC SKIP EX-CHANGE.
Adjust the volume	Turn VOLUME (or press VOL +/– on the remote).

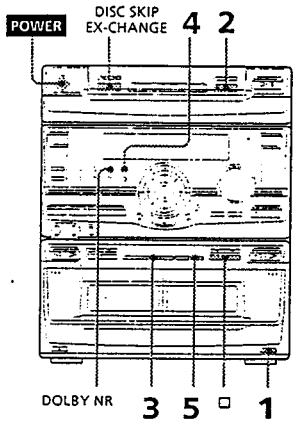
Tips

- Pressing ▷II when the power is off automatically turns the power on and starts CD playback if there is a CD in the tray (One Touch Play).
- You can switch from another source to the CD player and start playing a CD just by pressing ▷II or the DISC 1–3 buttons (Automatic Source Selection).
- If there is no CD in the player, "CD NO DISC" appears in the display.
- When a disc tray is selected or the CD placed on that tray is playing, the DISC 1–3 button for the respective tray lights green.

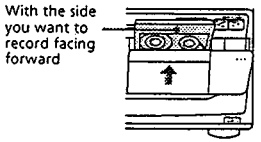
Recording a CD

— CD Synchro Recording

The CD SYNCHRO button lets you record from a CD to a tape easily. You can use TYPE I (normal) or TYPE II (CrO_2) tapes. The recording level is adjusted automatically.



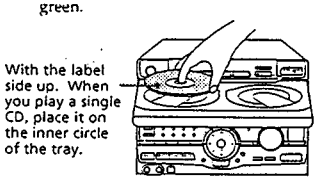
1 Press ⏏ EJECT and insert a blank tape into deck B.



2 Press ⏏ OPEN/CLOSE and place a CD.

Then press again to close the disc tray.

If the indicator for the tray you want to record is not lit green, press DISC SKIP EX-CHANGE repeatedly so that it lights green.



3 Press CD SYNCHRO.

Deck B stands by for recording and the CD player stands by for playback. ▷ (for front side) lights up.

4 Press DIRECTION repeatedly to select ⇉ to record on one side. Select ⇄ (or RELAY) to record on both sides.

5 Press ▯▯ on deck B.

Recording starts.

To stop recording

Press □ on deck B or on the CD player.

Tips

- If you want to record from the reverse side, press ◁ so that ◁ (for reverse side) lights up.
- When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears after pressing CD SYNCHRO.

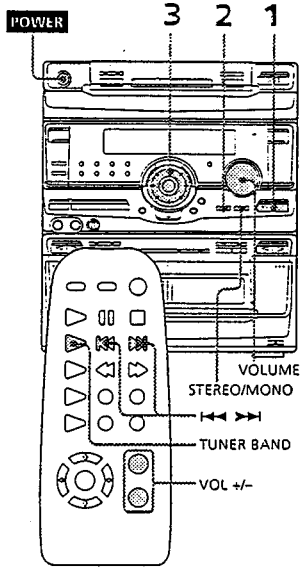
Note

You cannot listen to other sources while recording.

Listening to the radio

— Preset Tuning

Preset radio stations in the tuner's memory first (see "Step 3: Presetting radio stations").



continued

1 Press TUNER/BAND repeatedly until the band you want appears in the display.

the bands you can recieve vary depending on the model you purchased. Be sure to check which bands you can recieve.

Every time you press this button, the band changes as follows:

3 band models:

FM → MW → LW

4 band model:

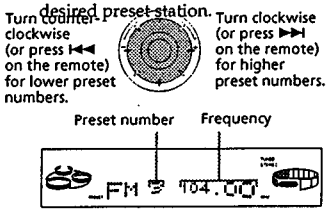
FM → MW → LW → UKV*

* "STEREO PLUS" is displayed when you select UKV.

2 Press TUNING MODE repeatedly so that "PRESET" appears in the display.

MANUAL → AUTO → PRESET

3 Turn the jog dial (or press ⏮ or ⏭ on the remote) to tune in the desired preset station.


Turn counter-clockwise (or press ⏮ on the remote) for lower preset numbers.
Turn clockwise (or press ⏭ on the remote) for higher preset numbers.
Preset number
Frequency
FM 3 104.00

To	Do this
Turn off the radio	Press POWER.
Adjust the volume	Turn VOLUME (or press VOL +/– on the remote).

To listen to non-preset radio stations

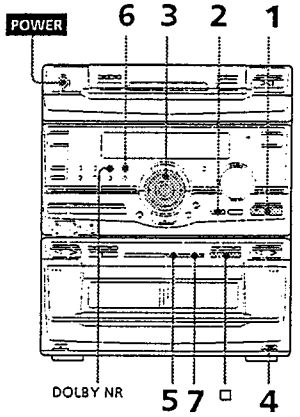
Press TUNING MODE repeatedly so that "MANUAL" appears in step 2, then tune in the station by turning the jog dial.

Tips

- Pressing TUNER/BAND when the power is off automatically turns the power on and tunes to the last received station (One Touch Play).
- You can switch from another source to the radio just by pressing TUNER/BAND (Automatic Source Selection).
- When an FM programme is noisy, press STEREO/MONO so that "MONO" appears in the display. There will be no stereo effect, but the reception will improve. Press the button again to restore the stereo effect.
- To improve broadcast reception, reorient the supplied aerials.

Recording from the radio

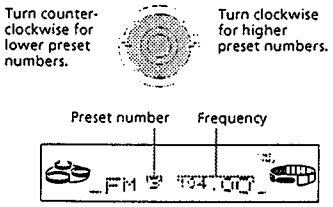
You can record the radio programme on a tape by calling up a preset station. You can use TYPE I (normal) or TYPE II (CrO_2) tapes. The recording level is automatically adjusted.



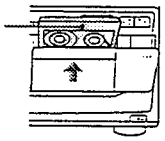
1 Press TUNER/BAND to select the band you want.

2 Press TUNING MODE so that "PRESET" appears in the display.

3 Turn the jog dial to tune in a preset station.



4 Press ⏏ EJECT and insert a blank tape into deck B.



5 Press ●.

Deck B stands by for recording.

6 Press DIRECTION repeatedly to select ═ to record on one side. Select ⊂⊃ (or RELAY) to record on both sides.

7 Press ⏸ on deck B.

Recording starts.

To stop recording

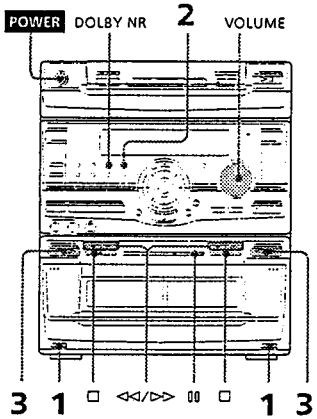
Press □ on deck B.

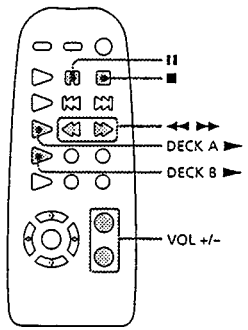
Tips

- If you want to record from the reverse side, press ◁ so that ◁ (for reverse side) lights up.
- When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- To record non-preset stations, select "MANUAL" in step 2, then turn the jog dial to tune in the desired station.
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears after pressing ●.
- If noise is heard while recording from the radio, move the respective aerial to reduce the noise.

Playing a tape

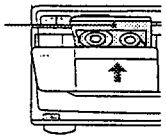
You can use any type of tape, TYPE I (normal), TYPE II (CrO_2) or TYPE IV (metal), since the deck automatically detects the tape type. To select either deck A or B, press DECK A or DECK B on the remote.





1 Press ⏏ EJECT and insert a recorded tape in deck A or B.

With the side you want to play facing forward



2 Press DIRECTION repeatedly to select ⇒ to play one side. Select ⇄* to play both sides.

To play both decks in succession, select RELAY (relay play).**

3 Press ▷.

Press ◁ to play the reverse side. The tape starts playing.

* The deck stops automatically after repeating the sequence five times.

** Relay play always follows the following sequence:

Deck A (front side), Deck A (reverse side), Deck B (front side), Deck B (reverse side).

To	Do this
Stop play	Press □ (or ■ on the remote).
Pause (Deck B only)	Press ▯▯. Press again to resume play.
Fast-forward	Press ▷▷ while playing the front side or ◁◁ while playing the reverse side.
Rewind	Press ◁◁ while playing the front side or ▷▷ while playing the reverse side.
Remove the cassette	Press ⏏ EJECT.
Adjust the volume	Turn VOLUME (or press VOL +/– on the remote).

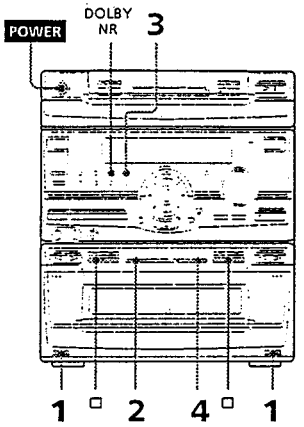
Tips

- Pressing ▷ or ◁ when the power is off automatically turns the power on and starts tape playback if there is a tape in the deck (One Touch Play).
- You can switch from another source to the tape deck just by pressing ▷ or ◁ (Automatic Source Selection).
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears.
- When dubbing tapes originally recorded with Dolby NR B, the dubbed tape is automatically played with Dolby NR B.

Recording from a tape

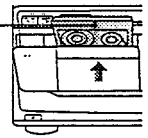
— High-speed Dubbing

You can use TYPE I (normal) or TYPE II (CrO_2) tapes. The recording level is automatically adjusted.



1 Press ⏏ EJECT and insert a recorded tape in deck A and a blank tape in deck B.

With the side you want to play/record facing forward



2 Press HIGH SPEED DUBBING.

Deck B stands by for recording.

continued

3 Press DIRECTION repeatedly to select ⇉ to record on one side. Select ⇄ (or RELAY) to record on both sides.

4 Press ▯▯.
Dubbing starts.

To stop dubbing

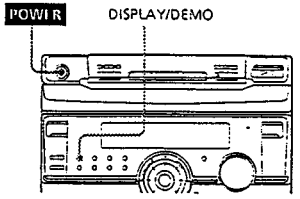
Press □ on deck A or B.

Tips

- When you dub on both sides, start recording from the front side. If you record from the reverse side, recording stops at the end of the reverse side.
- If you set DIRECTION to ⇄ when the tapes you use have different lengths, the tape in each deck reverses independently. If you select RELAY, the tapes in both decks reverse together.
- You don't have to set DOLBY NR, since the tape in deck B is automatically recorded in the same state as the tape in deck A.

Using the CD display

You can check the remaining time of the current track or that of the CD.



➡ Press DISPLAY/DEMO during playback.
Each time you press the button during normal playback, the display changes as follows:

Playing time on the current track
↓
Remaining time on the current track
↓
Remaining time on current CD (1 DISC mode) or "PLAY" display (ALL DISCS mode)
↓
Clock display (for eight seconds)
↓
Effect (P FILE) name or "EFFECT ON (OFF)"

To check the total playing time and the number of tracks on a CD

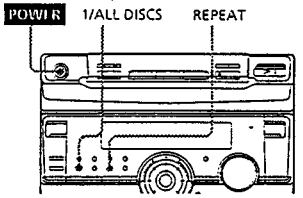
Press DISPLAY/DEMO in the stop mode.

If you press DISPLAY/DEMO again, the clock display appears for eight seconds then the display returns to the previous indication.

Playing the CD tracks repeatedly

— Repeat Play

This function lets you repeat a single CD or all CDs in normal play, Shuffle Play and Programme Play.



➡ Press REPEAT during playback until "REPEAT" appears in the display.
Repeat Play starts. Do the following procedure to change the repeat mode.

To repeat	Press
All the tracks on the current CD	1/ALL DISCS repeatedly until "1 DISC" appears in the display.
All the tracks on all CDs	1/ALL DISCS repeatedly until "ALL DISCS" appears in the display.
Only one track*	REPEAT repeatedly until "REPEAT 1" appears in the display while playing the track you want to repeat.

* You can't repeat a single track during Shuffle Play and Programme Play.

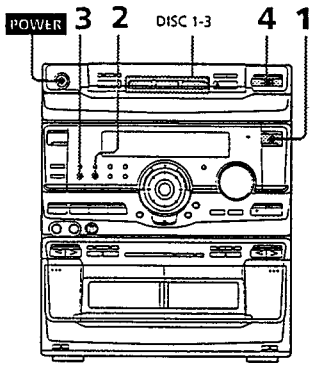
To cancel Repeat Play

Press REPEAT so that "REPEAT" or "REPEAT 1" disappears from the display.

Playing the CD tracks in random order

— Shuffle Play

You can play all the tracks on one CD or all CDs in random order.



1 Press FUNCTION repeatedly until "CD" appears in the display, then place a CD.

2 Press PLAY MODE repeatedly until "SHUFFLE" appears in the display.

3 Press 1/ALL DISCS to choose "1 DISC" or "ALL DISCS".
"ALL DISCS" shuffles all the CDs in the player. "1 DISC" shuffles the CD whose DISC indicator is green.

4 Press ▷II.
"🔀" appears and then all the tracks play in random order.

To cancel Shuffle Play

Press PLAY MODE repeatedly until "SHUFFLE" or "PROGRAM" disappears from the display. The tracks continue playing in their original order.

To select a desired CD

Press DISC 1~3.

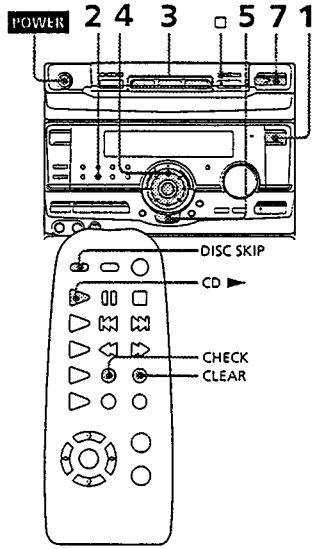
Tips

- You can start Shuffle Play during normal play by pressing PLAY MODE repeatedly to select "SHUFFLE".
- To skip a track, turn the jog dial clockwise (or press ▶▶I on the remote).

Programming the CD tracks

— Programme Play

You can make a programme of up to 32 tracks from all the CDs in the order you want them to be played.

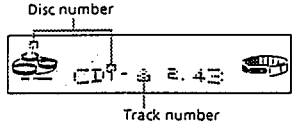


1 Press FUNCTION repeatedly until "CD" appears in the display, then place a CD.

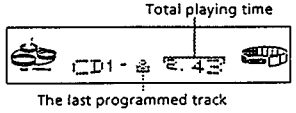
2 Press PLAY MODE repeatedly until "PROGRAM" appears in the display.

3 Press one of the DISC 1~3 buttons to select a CD.

4 Turn the jog dial until the desired track appears in the display.



5 Press ENTER/NEXT.
The track is programmed. "STEP" and the programmed playing order appear, followed by the total playing time.



6 To programme additional tracks, repeat steps 3 to 5.
Skip step 3 to select tracks from the same disc.

7 Press ▷II.
All the tracks play in the order you selected.

To cancel Programme Play

Press PLAY MODE repeatedly until "PROGRAM" or "SHUFFLE" disappears from the display.

continued

Programming the CD tracks (continued)

To	Press
Check the programme	CHECK on the remote repeatedly. After the last track, "CHECK END" appears.
Clear a track from the end	CLEAR on the remote in stop mode.
Clear a specific track	CHECK on the remote repeatedly until the number of the track to be erased lights up, then press CLEAR.
Add a track to the programme	1 Select the disc tray with a DISC 1–3 button. 2 Select the track by turning the jog dial. 3 Press ENTER/NEXT.
Clear the entire programme	□ once in stop mode or twice while playing.

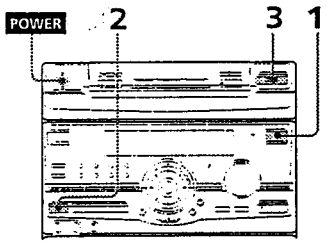
Tips

- The programme you made remains in the CD player even after it has been played back. Press ▷II to play the same programme again.
- If "–.–" appears instead of the total playing time during programming, this means:
  - you have programmed a track number which exceeds 20 .
  - the total playing time has exceeded 100 minutes.

Playing CDs without interruption

— Non Stop Play

You can play CDs without pausing between tracks.



1 Press FUNCTION repeatedly until "CD" appears in the display, then place a CD.

2 Press NON-STOP so that the indicator on the button lights up.

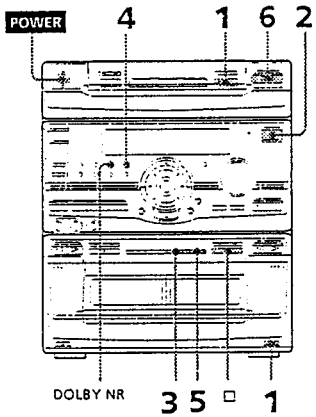
3 Press ▷II.

To cancel Non Stop Play

Press NON-STOP so that the indicator on the button goes out.

Recording on a tape manually

You can record from CD, tape, or radio as you like. For example, you can record just the songs you want or record from the middle of the tape. The recording level is adjusted automatically.



1 Insert a blank tape into deck B.

2 Press FUNCTION repeatedly until the source you want to record (e.g., CD) appears.

3 Press ●.
Deck B stands by for recording. ▻ (for front side) lights up.

4 Press DIRECTION repeatedly to select ═ to record on one side. Select ⊂⊃ (or RELAY) to record on both sides.

5 Press II on deck B.
Recording starts.

6 Start playing the source to be recorded.

To	Press
Stop recording	□ on the deck B
Pause recording	II on the deck B

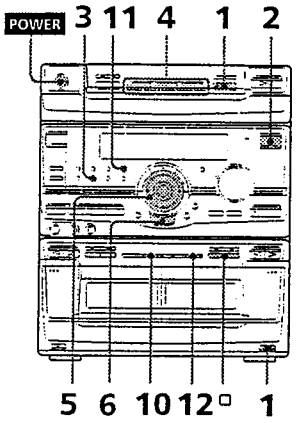
Tips

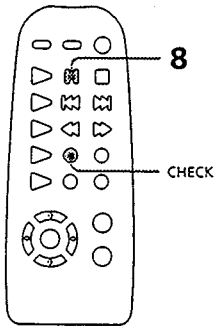
- If you want to record from the reverse side, press ◅ so that ◅ (for reverse side) lights up.
- When you want to reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that "DOLBY NR B" appears after pressing ●.
- To skip tracks while recording from a tape, press ▷▷ or ◁◁ on deck A. Deck B stands by for recording, and you can skip tracks. To resume dubbing, press II on deck B.

Recording a CD by specifying track order

— Programme Edit

You can record tracks from all the CDs in the order you want. When programming, make sure the playing times for each side do not exceed the length of one side of the tape.





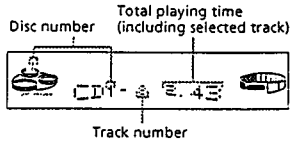
1 Place a CD and insert a blank tape into deck B.

2 Press FUNCTION repeatedly until "CD" appears in the display.

3 Press PLAY MODE repeatedly until "PROGRAM" appears in the display.

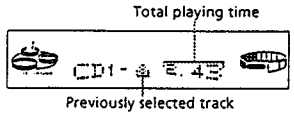
4 Press one of the DISC 1~3 buttons to select a CD.

5 Turn the jog dial until the desired track appears in the display.



6 Press ENTER/NEXT.

The track is programmed. "STEP" and the programmed playing order appear, followed by the total playing time.



7 To programme additional tracks to be recorded on side A, repeat steps 4 to 6.

Skip step 4 to select tracks from the same disc.

8 Press II on the remote to insert a pause at the end of side A.

"P" appears in the display and the total playing time resets to "0.00" in the display.

9 Repeat steps 5 and 6 for tracks from the same disc or steps 4 to 6 for tracks from another disc to programme the remaining tracks to be recorded on side B.

10 Press CD SYNCHRO.

Deck B stands by for recording and the CD player stands by for playback. ▻ (for front side) lights up.

11 Press DIRECTION repeatedly to select ⟹ to record on one side. Select ⟲ (or RELAY) to record on both sides.

12 Press II on deck B.

Recording starts.

To stop recording

Press □ on the deck B or on the CD player.

To check the order

Press CHECK on the remote repeatedly. After the last track, "CHECK END" appears.

To cancel Programme Edit

Press PLAY MODE repeatedly until "PROGRAM" or "SHUFFLE" disappears from the display.

Selecting tape length automatically

— Tape Select Edit

You can check the most suitable tape length for recording a CD. Note that you cannot use Tape Select Edit for discs containing more than 20 tracks.

➡ After inserting a CD, press EDIT once, so that "EDIT" flashes.

The required tape length for the currently selected CD appears, followed by the total playing time and tracks for side A and side B.

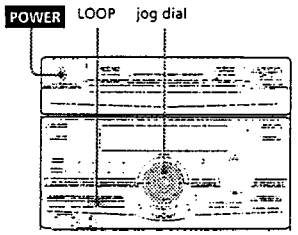
Note

You cannot use this function after programming. In order to use this function, you must first erase the programme (see "To clear the entire program" on page 22).

Looping part of a CD

— Loop

With the loop function, you can repeat part of a CD during playback. This lets you create original recordings.



➡ Press and hold LOOP during playback at the point you want to start the Loop function, and release to resume normal play.

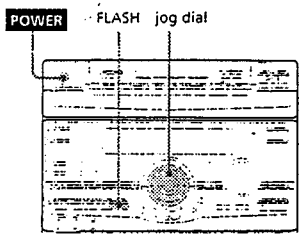
To adjust the loop length

Turn the jog dial while holding LOOP (or press MUSIC MENU ← or → while holding LOOP on the remote) to select different loop lengths (LOOP 1~20).

Flashing part of a CD

— Flash

With the flash function, you can "flash" the CD sound during playback. This lets you create original recordings.



➡ Press and hold FLASH during playback at the point you want to start the Flash function, and release to resume normal play.

To adjust the flash length

Turn the jog dial while holding FLASH (or press MUSIC MENU ← or → while holding FLASH on the remote) to select different flash lengths (FLASH 1~20).

To use LOOP and FLASH together

Press and hold both LOOP and FLASH at the same time.

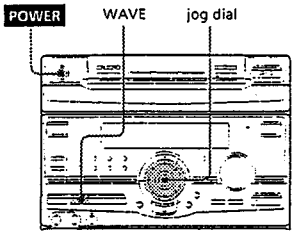
Notes

- The loop and flash length cannot be adjusted during this operation. Adjust the loop and flash lengths independently beforehand if necessary.
- To record the flash effect, use the analog (VIDEO/MD OUT) connections or this unit's tape deck.

Waving the equalizer

— Wave

With the Wave function, you can fluctuate the graphic equalizer automatically. This effect can be used with any source, but it cannot be recorded.



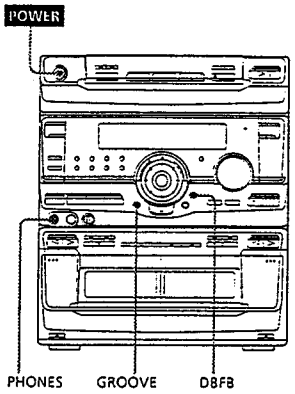
➡ Press and hold WAVE to start the Wave function, and release to resume normal listening.

To adjust the wave length

Turn the jog dial while holding WAVE to select a different wave length (WAVE1~10).

Adjusting the sound

You can reinforce the bass, create a more powerful sound, and listen with headphones.



To reinforce bass (DBFB)

Press DBFB*.

Every time you press the button, the display changes as follows:

DBFB ▮\\\ → DBFB ▮\\\\\ → display off

"DBFB ▮\\\\\" is more effective than "DBFB ▮\\\".

* DBFB = Dynamic Bass Feedback

For a powerful sound (GROOVE)

Press GROOVE. The volume switches to power mode, DBFB is automatically set to full strength, the equalizer curve changes, and the "GROOVE" button lights up. Press GROOVE again to return to the previous volume.

Notes

- With some songs, the music will sound distorted when you use the DBFB system with the graphic equalizer if the bass is too strong. Adjust the bass slowly while listening to music so that you can monitor the effect of the adjustment.
- Cancelling GROOVE sets DBFB to "DBFB ▮\\\" and flattens the equalizer curve. To cancel the DBFB level, press DBFB until the indication disappears. Adjust the equalization to obtain the effect you desire.

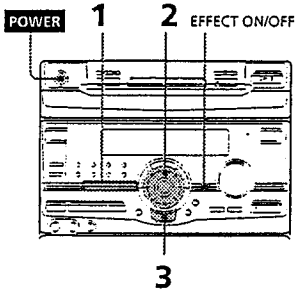
To listen through the headphones

Connect the headphones to PHONES jack. No sound will come from the speakers.

Selecting the audio emphasis

The audio emphasis menu lets you select the sound characteristic according to the sound you are listening to.

The personal file function (see "Making a personal audio emphasis file") lets you store your own effects.



1 Press MUSIC, MOVIE, or GAME (or MUSIC MENU +/+ on the remote repeatedly) to select a menu.

See the chart "Music menu options" below. The last effect chosen from that menu appears in the display.

2 Use the jog dial (or press MUSIC MENU + / + on the remote repeatedly) to select the preset you desire.

The preset name appears in the display.

3 Press ENTER/NEXT.

You don't need to press ENTER/NEXT when you use the remote.

To cancel the effect

Press EFFECT ON/OFF repeatedly (or MUSIC MENU ON/OFF on the remote) so that "EFFECT OFF" appears in the display.

Music menu options

"SUR ▮▮▮▮▮" appears if you select an effect with surround effects.

MENU button	Effect	For
MUSIC	ROCK POP JAZZ DANCE SOUL	Standard music sources
MOVIE	ACTION SF ROMANCE DRAMA SPORTS	Soundtracks and special listening situations
GAME	SHOOTING RACING RPG BATTLE ADVENTURE	Video games

continued

Selecting the audio emphasis (continued)

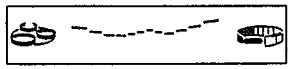
To change the equalizer display

Each time you press DISPLAY/DEMO, the equalizer display changes to show one of the four displays below.

Spectrum analyzer pattern 1

↓

Spectrum analyzer pattern 2

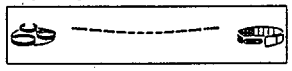


↓

Spectrum analyzer pattern 3

↓

Graphic equalizer curve



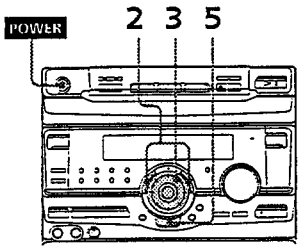
Adjusting the audio emphasis

You can adjust the audio emphasis using the graphic equalizer and surround effect.

Adjusting the graphic equalizer

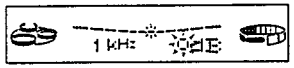
You can adjust the sound by raising or lowering the levels of specific frequency ranges.

Before operation, first select the audio emphasis you want for your basic sound.

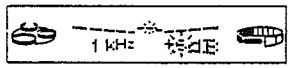


1 Select the audio emphasis you want for your basic sound (see "Selecting the audio emphasis").

2 Press HIGH FREQUENCY or LOW FREQUENCY repeatedly to select a frequency band.



3 Turn the jog dial to adjust level.



4 Repeat steps 2 and 3.

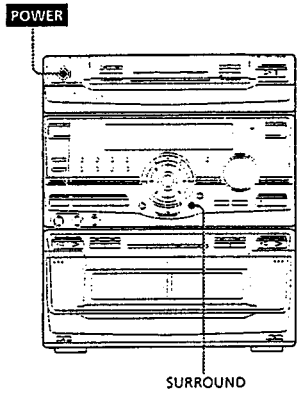
5 Press ENTER/NEXT when finished.

Note

If you choose another menu audio emphasis (other than "EFFECT OFF") the adjusted sound effect is lost. To retain the adjusted sound effect for future use, store it in a personal file. (See "Making a personal audio emphasis file".)

Activating the surround effect

You can enjoy the surround effect.



→ Press SURROUND repeatedly so that "SUR" appears in the display.

Note

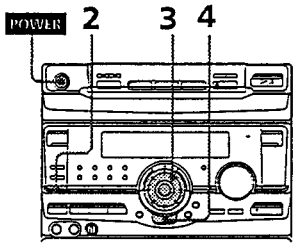
When you choose other sound effects, the surround effects will be canceled. If you want to memorize the effect, store it into a personal file (see "Making a personal audio emphasis file ").

Making a personal audio emphasis file

— Personal file

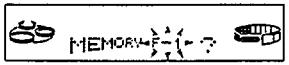
You can create a personal file of audio patterns (surround effect and graphic equalizer) and store them in the memory of the unit. Later call up an audio pattern to play a favorite tape, CD, or radio programme. Create up to five audio files.

Before operation, first select the audio emphasis you want for your basic sound.



1 Obtain the sound effect you want by using the graphic equalizer and surround effect.

2 Press P FILE MEMORY.
The personal file number appears in the display.



3 Use the jog dial to select the file number (P FILE) where you want to store the sound effect.

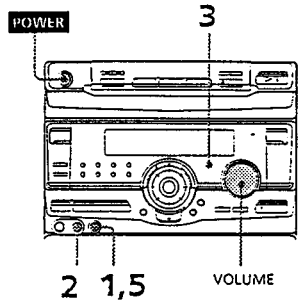
4 Press ENTER/NEXT.
The adjusted sound effects are stored under the selected file number. The settings previously stored at this memory location are erased and replaced by the new settings.

To call up the personal file

1 Press P FILE (or MUSIC MENU ♦/♦ on the remote repeatedly) to display the last selected personal file.
2 Use the jog dial (or press MUSIC MENU ♦/♦ on the remote repeatedly) to select the personal file you desire.
3 Press ENTER/NEXT.
You don't need to press ENTER/NEXT when you use the remote.

Singing along: Karaoke

You can sing along with any stereo CD or tape by turning down the singer's voice. You need to connect an optional microphone.



1 Turn MIC LEVEL to MIN to turn down the microphone control level.

2 Connect an optional microphone to MIX MIC.

3 Press KARAOKE PON/MPX repeatedly to obtain the karaoke effect you desire.
Every time you press the button, the display changes as follows:

KARAOKE PON → MPX R → MPX L
↑ EFFECT OFF ←

The "↖" indicator appears in the display when a karaoke mode is activated.
To sing karaoke with decreasing the vocal level of a CD, select KARAOKE PON. To sing karaoke of multiplex CD or tape, select MPX R or MPX L.

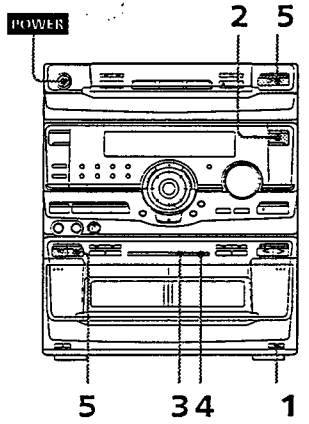
4 Start playing the music and adjust the volume.

5 Adjust the microphone volume by turning MIC LEVEL.

When you are done

Turn MIC LEVEL to MIN and disconnect the microphone from MIX MIC, then press KARAOKE PON/MPX repeatedly so that "↖" disappears.

Mixing and recording sounds



1 Do the above steps 1 to 5. Then, insert a tape in deck B.

2 Press FUNCTION repeatedly to select the source you desire and set it to pause mode.

continued

Singing along: Karaoke (continued)

3 Press ●.

4 Press ▯▯.

5 Press ▷ to start playing the CD player (or tape deck A).
Playback starts. Start singing along with the music.

To stop recording

Press ■ on deck B and the CD player.

Tips

- If acoustic feedback (howling) occurs, move the microphone away from the speakers or change the direction of the microphone.
- If you want to record your voice through the microphone only, you can do so by selecting the CD function and not playing a CD.

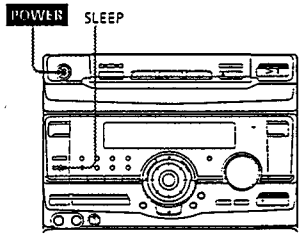
Notes

- If you press EFFECT ON/OFF or recall a sound effect, the karaoke mode is cancelled.
- The instrumental sound may be reduced as well as the singer's voice when the sound is recorded in monaural.
- The singer's voice may not be reduced when:
  - —only a few instruments are playing
  - —a duet is being played
  - —the source has strong echoes or chorus
  - —the singer's voice deviates from the centre.
  - —the voice on the source is singing in high soprano or tenor.

Falling asleep to music

— Sleep Timer

You can let the system turn off at the preset time, so you can sleep to the music. You can preset the time to be turned off by 10 minutes.



➡ Press SLEEP.
Every time you press the button, the minute display (the turn-off time) changes as follows:
AUTO → 90min → 80min → 70min → ··· → 10min → OFF → AUTO ···

When you choose auto

The power turns off when the current CD or tape finishes playback (for up to 100 minutes).

To check the remaining time

Press SLEEP once.

To change the time to turn off

Select the time you want by pressing SLEEP.

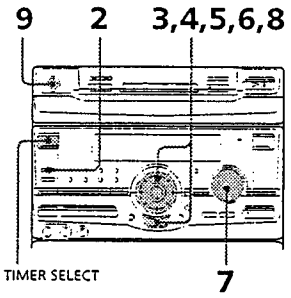
To cancel the Sleep Timer function

Press SLEEP repeatedly until "OFF" appears.

Waking up to music

— Wake-up Timer

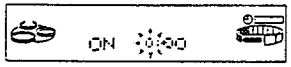
You can wake up to music at a preset time every day. Make sure you have set the clock (see "Step 2: Setting the time").



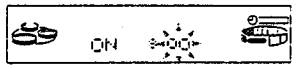
1 Prepare the music source you want to play.
- CD: Insert a CD. To start from a specific track, make a programme (see "Programming the CD tracks").
- Tape: Insert an tape with the side you want to play facing forward.
- Radio: Tune in the preset station you want (see "Step 3: Presetting radio stations").

2 Press CLOCK TIMER SET.
"SET (DAILY 1)" appears.

3 Turn jog dial to select DAILY 1 or 2, then press ENTER/NEXT.
"ON" appears and the hour digits flash in the display.



4 Set the time to start playback.
Turn jog dial to set the hour, then press ENTER/NEXT.
The minute indication starts flashing.



Turn jog dial to set the minute, then press ENTER/NEXT.
The hour indication flashes again.

5 Set the time to stop playback following the above procedure.

6 Turn jog dial until the music source you want appears.
The indications change as follows:
TUNER → CD PLAY → TAPE PLAY

7 Adjust the volume.

8 Press ENTER/NEXT.
The start time, followed by the stop time and the music source, appears, then the original display appears.

9 Turn off the power.

continued

To check the setting

Press TIMER SELECT and turn the jog dial to select the respective mode (DAILY 1 or DAILY 2), then press ENTER/NEXT. To change the setting, start over from step 1.

To cancel the timer operation

Press TIMER SELECT and turn the jog dial to select "OFF", then press ENTER/NEXT.

Tip

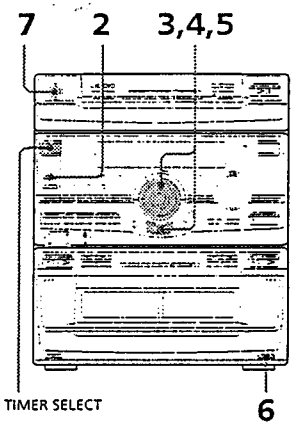
The power truns on 15 seconds before the preset time.

Note

When setting the wake-up timer, set the equalizer display to anything other than Spectrum analyzer pattern 3. (See "To change the equalizer display" on page 30.)

Timer-recording radio programmes

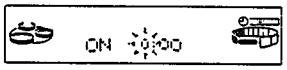
To timer-record, you must preset the radio station (see "Step 3: Presetting radio stations") and set the clock (see "Step 2: Setting the time") beforehand.



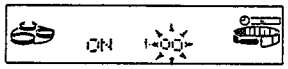
1 Tune in the preset radio station (see "Listening to the radio").

2 Press CLOCK TIMER SET.
"SET (DAILY 1)" appears.

3 Turn jog dial to select REC, then press ENTER/NEXT.
"ON" appears and the hour digits flash in the display.



4 Set the time to start recording.
Turn jog dial to set the hour, then press ENTER/NEXT.
The minute indication starts flashing.



Turn jog dial to set the minute, then press ENTER/NEXT.
The hour indication flashes again.

5 Set the time to stop recording following the above procedure.
The start time appears, followed by the stop time, the recording source and the radio station, then the original display appears.

6 Insert a recordable tape.

7 Turn off the power.
When the recording starts, the volume level is set to the minimum.

To check the setting

Press TIMER SELECT and turn the jog dial to select "REC", then press ENTER/NEXT. To change the setting, start over from step 1.

To cancel the timer operation

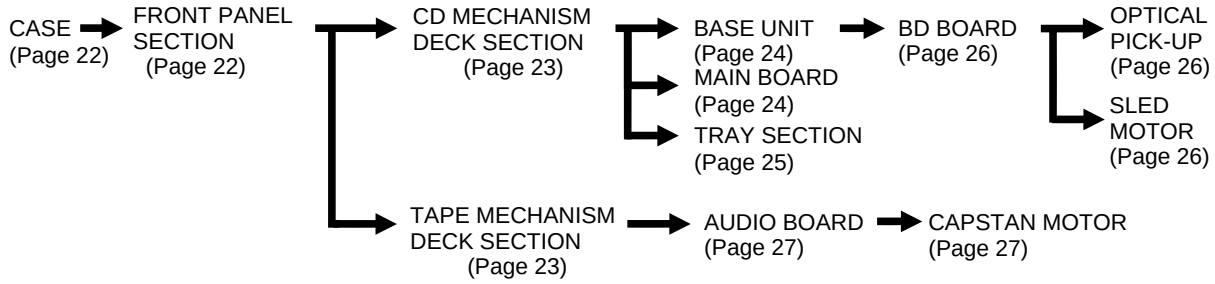
Press TIMER SELECT and turn the jog dial to select "OFF", then press ENTER/NEXT.

Notes

- When setting the timer-recording, set the equalizer display to anything other than Spectrum analyzer pattern 3. (See "To change the equalizer display" on page 30.)
- If the power is on at the preset time, the recording will not be made.

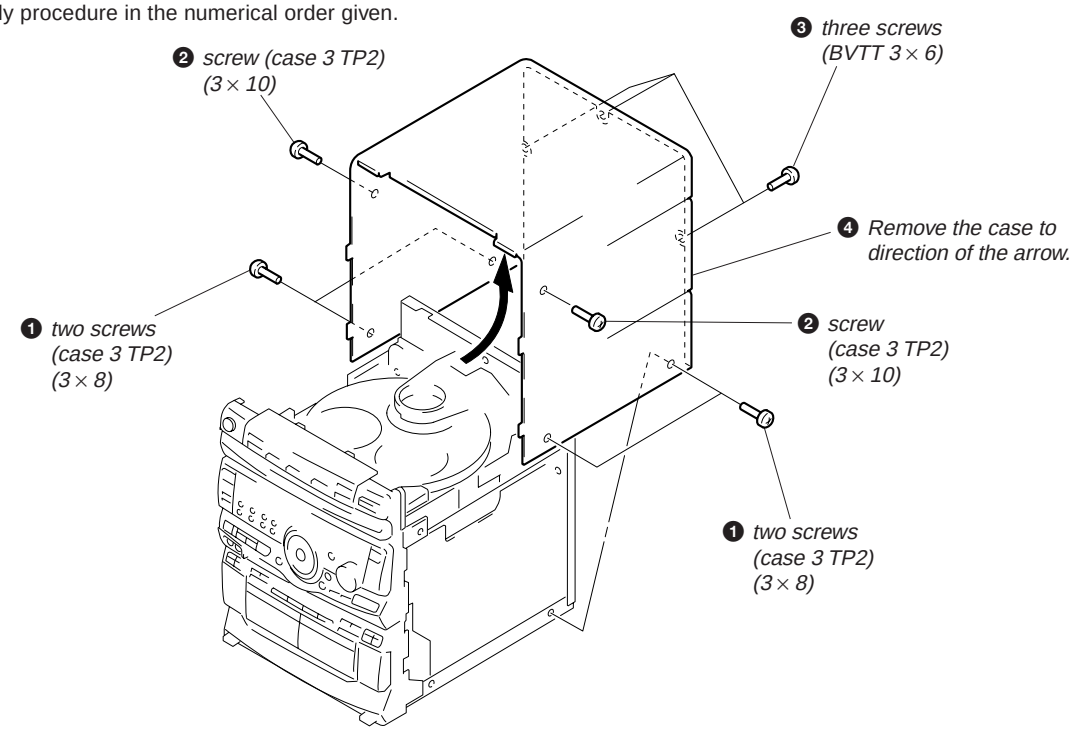
SECTION 2
DISASSEMBLY

• This set can be disassembled in the order shown below.

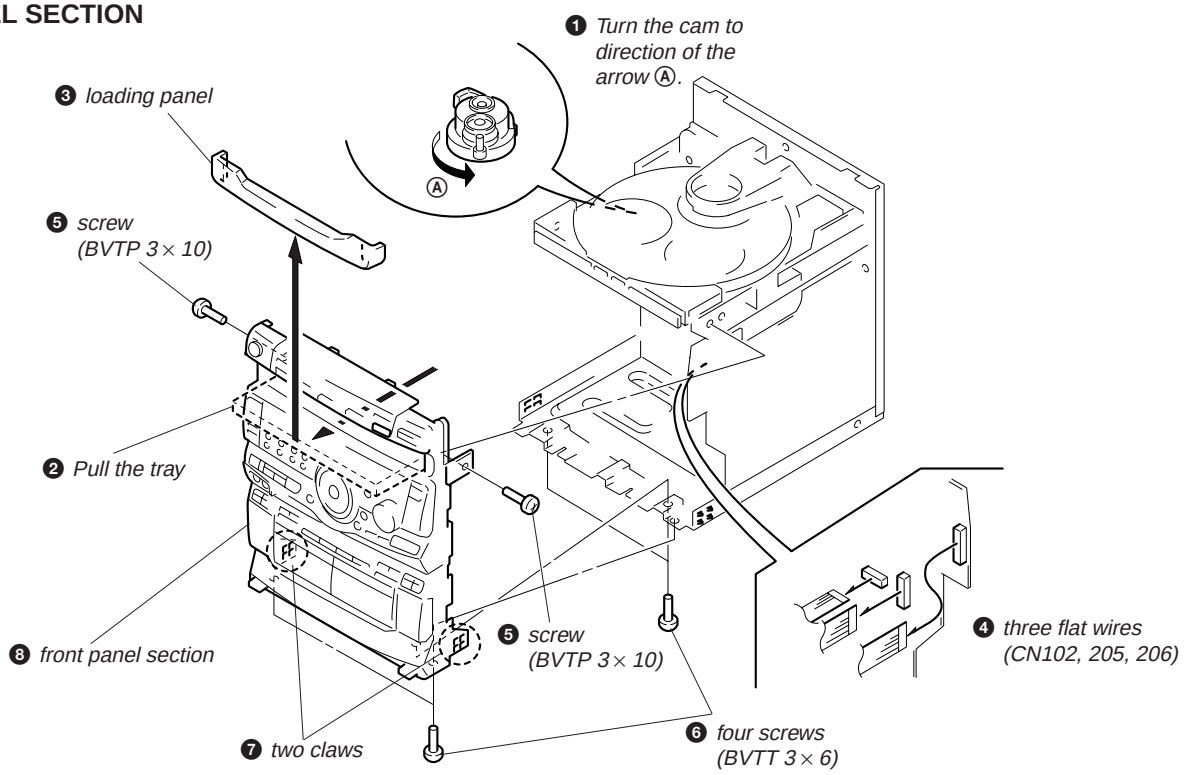

CASE (Page 22)
FRONT PANEL SECTION (Page 22)
CD MECHANISM DECK SECTION (Page 23)
BASE UNIT (Page 24)
BD BOARD (Page 26)
OPTICAL PICK-UP (Page 26)
MAIN BOARD (Page 24)
SLED MOTOR (Page 26)
TRAY SECTION (Page 25)
TAPE MECHANISM DECK SECTION (Page 23)
AUDIO BOARD (Page 27)
CAPSTAN MOTOR (Page 27)

Note: Follow the disassembly procedure in the numerical order given.

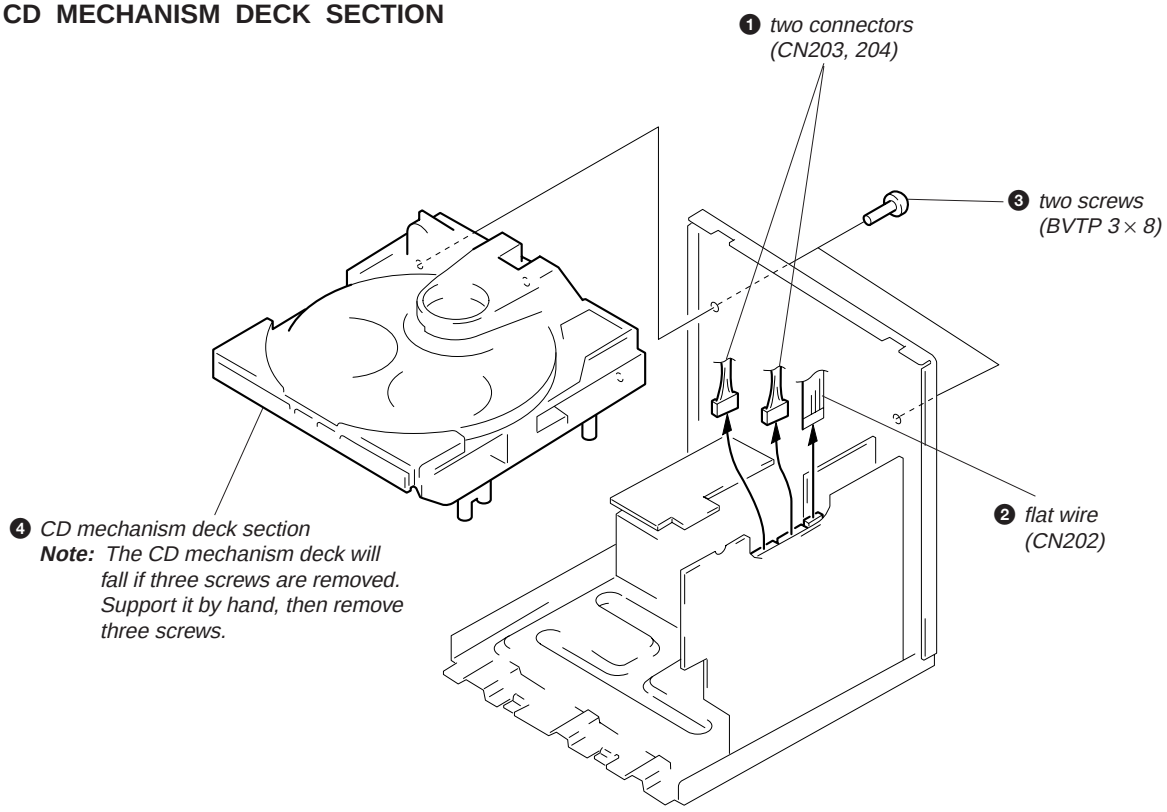
CASE


❸ three screws (BVTT 3 × 6)
❷ screw (case 3 TP2) (3 × 10)
❹ Remove the case to direction of the arrow.
❶ two screws (case 3 TP2) (3 × 8)
❷ screw (case 3 TP2) (3 × 10)
❶ two screws (case 3 TP2) (3 × 8)

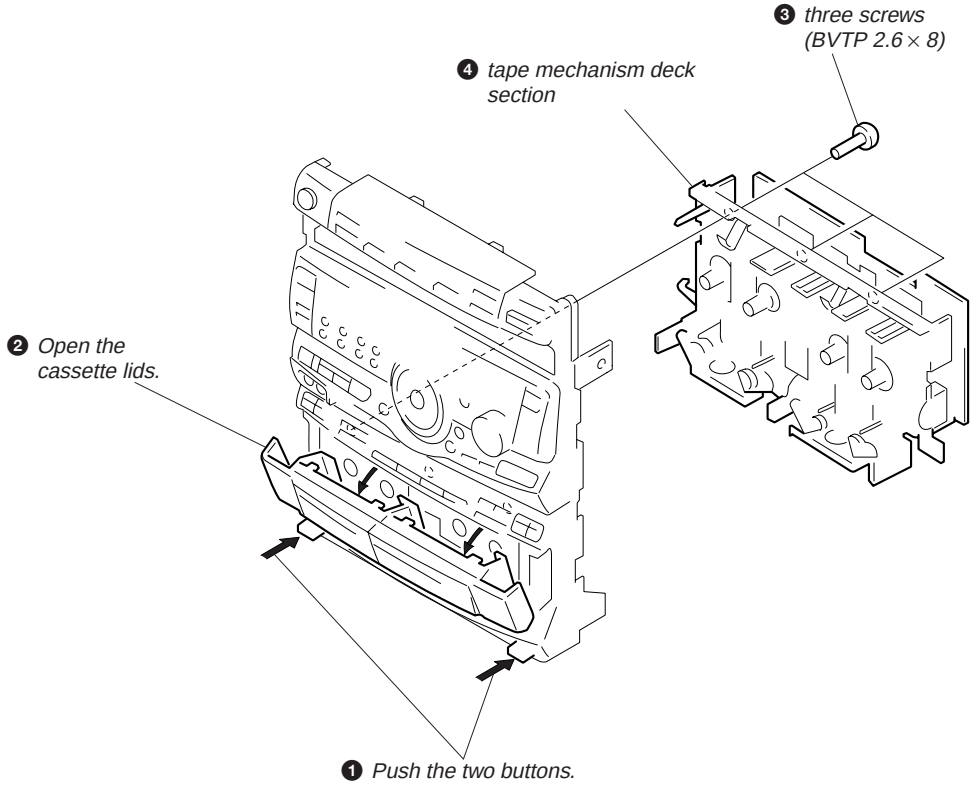
FRONT PANEL SECTION


❶ Turn the cam to direction of the arrow Ⓐ.
Ⓐ
❸ loading panel
❺ screw (BVTP 3 × 10)
❷ Pull the tray
❽ front panel section
❺ screw (BVTP 3 × 10)
❹ three flat wires (CN102, 205, 206)
❼ two claws
❻ four screws (BVTT 3 × 6)

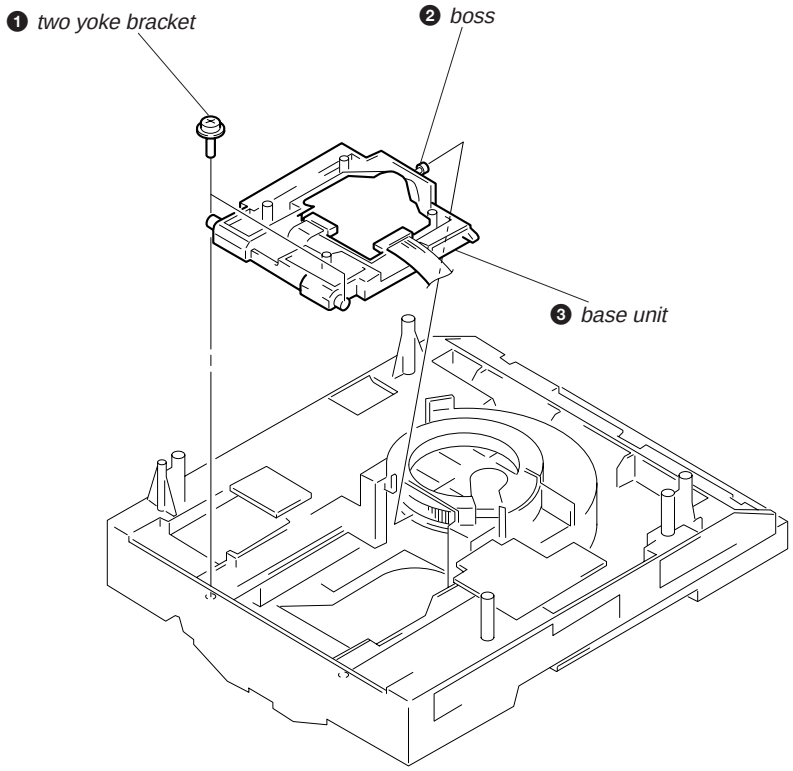
CD MECHANISM DECK SECTION


❶ two connectors (CN203, 204)
❸ two screws (BVTP 3 × 8)
❷ flat wire (CN202)
❹ CD mechanism deck section
Note: The CD mechanism deck will fall if three screws are removed. Support it by hand, then remove three screws.

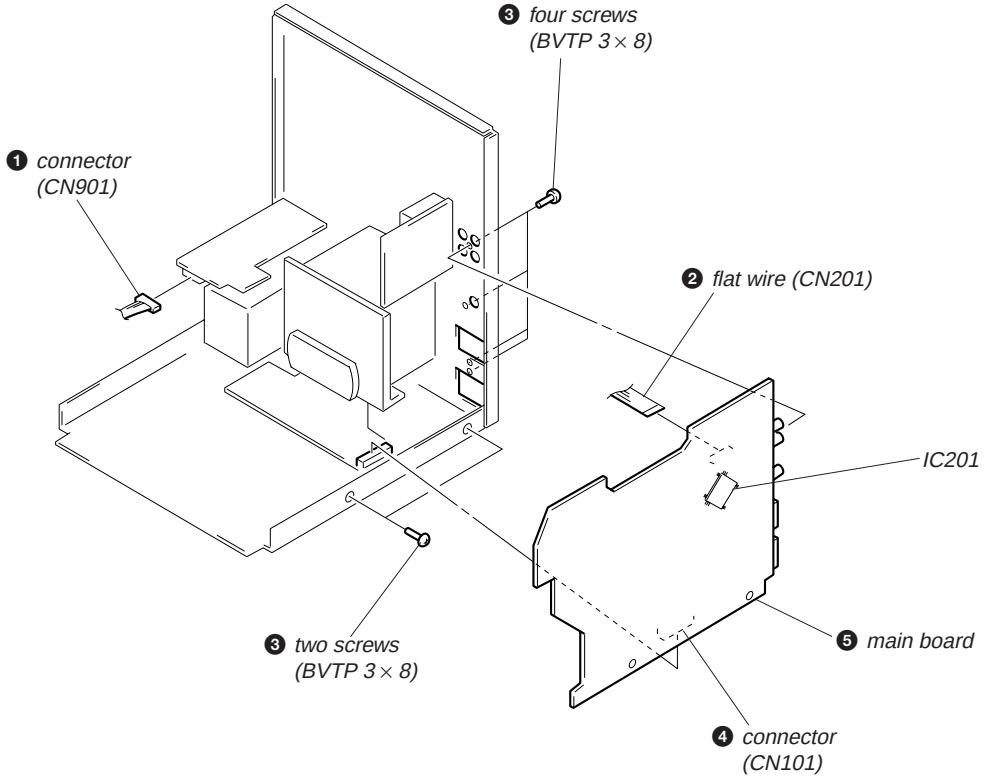
TAPE MECHANISM DECK SECTION



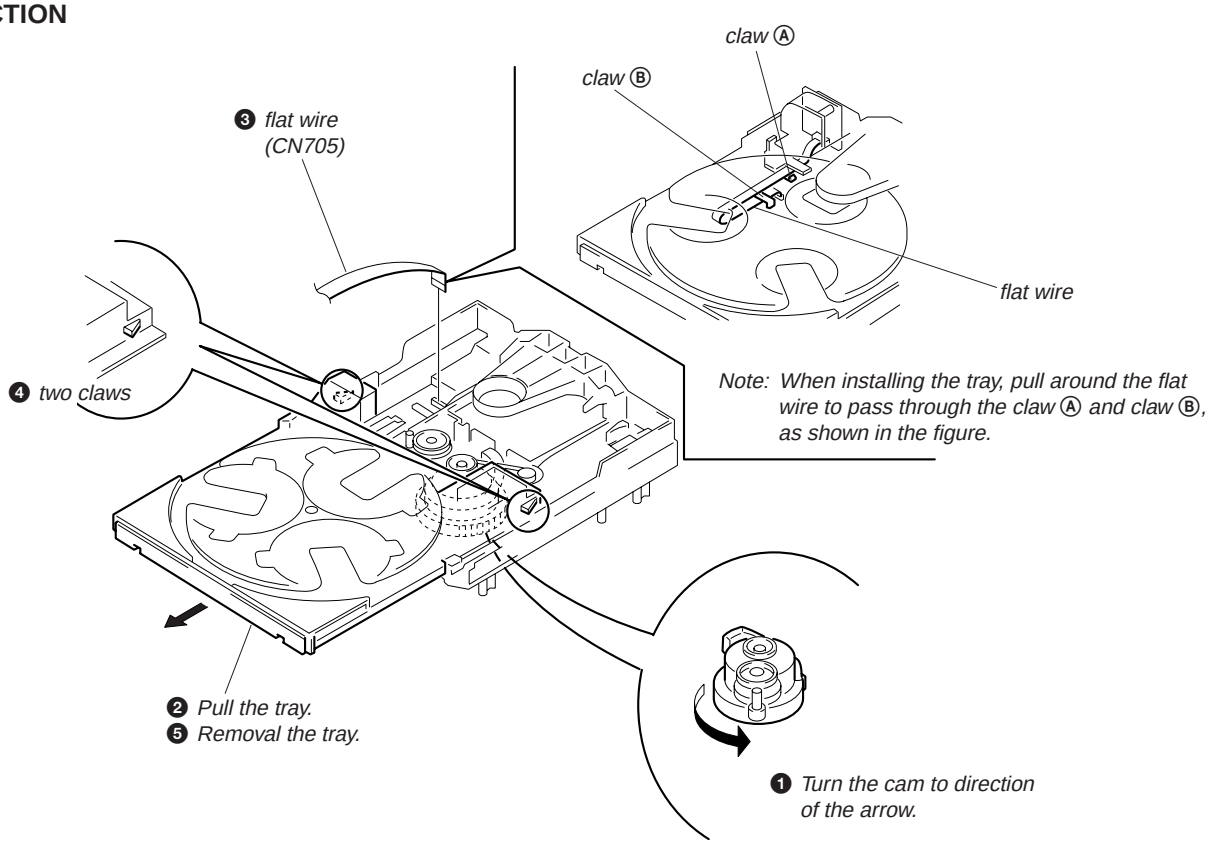
BASE UNIT



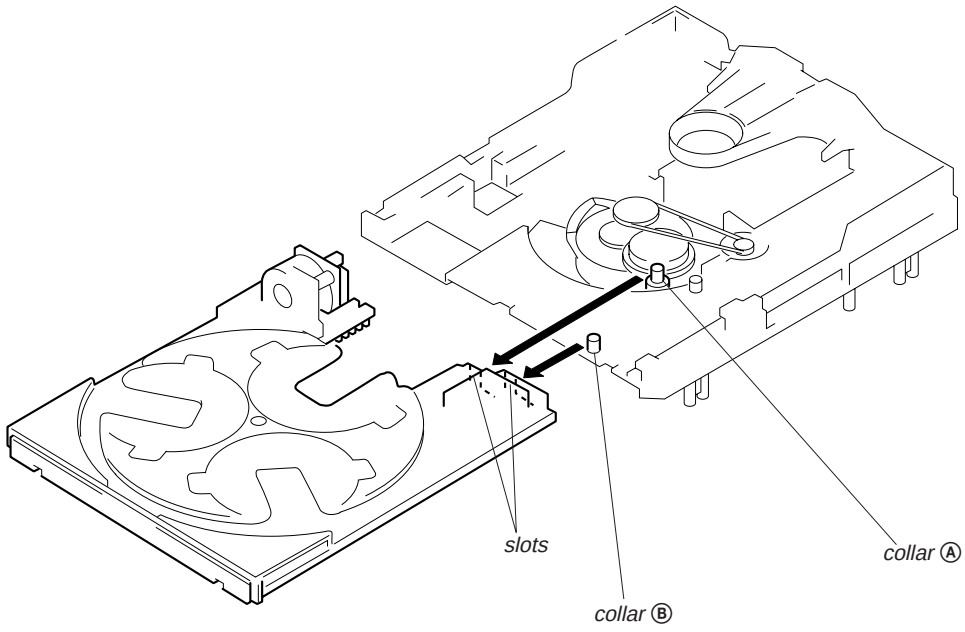
MAIN BOARD



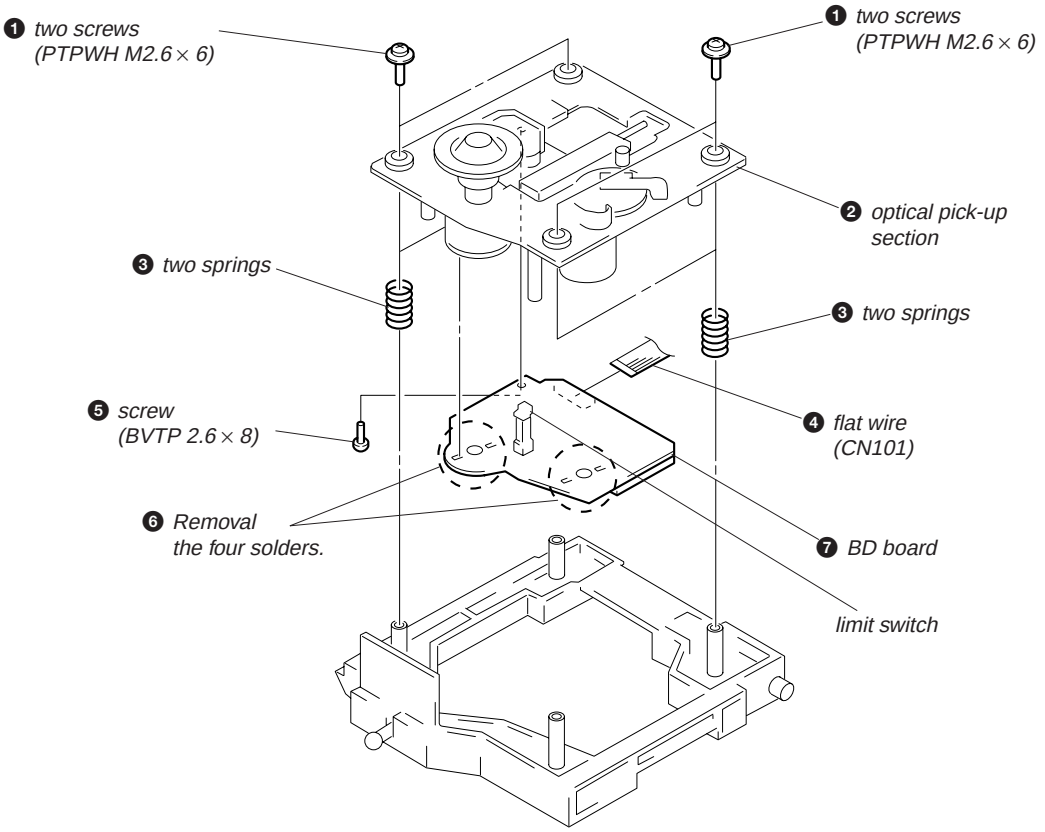
TRAY SECTION


claw Ⓐ
claw Ⓑ
❸ flat wire
(CN705)
flat wire
❹ two claws
Note: When installing the tray, pull around the flat wire to pass through the claw Ⓐ and claw Ⓑ, as shown in the figure.
❷ Pull the tray.
❺ Removal the tray.
❶ Turn the cam to direction of the arrow.

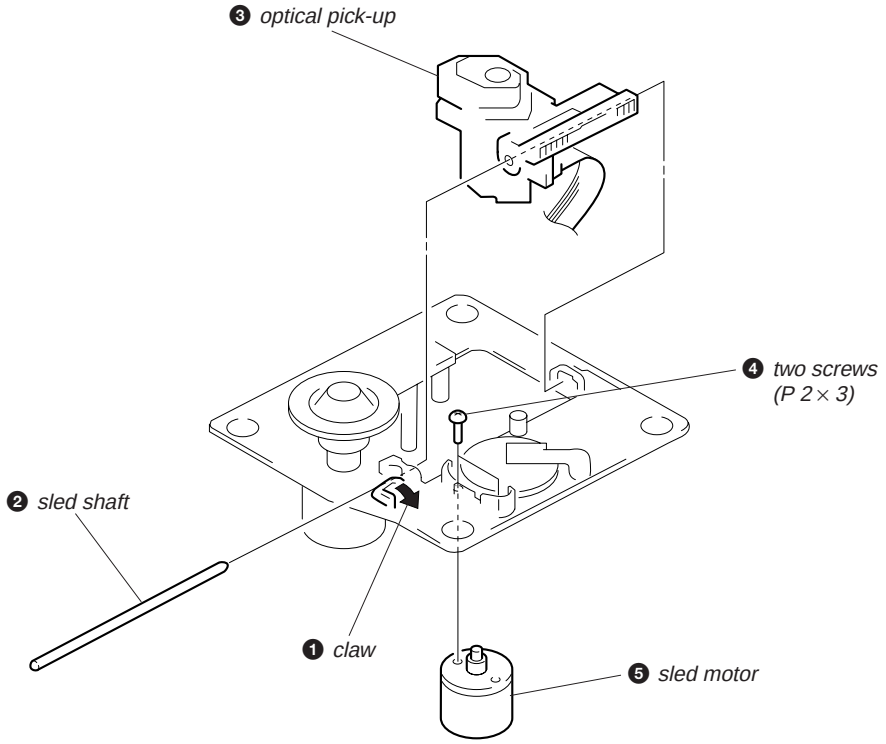
Note: When installing the tray, take care so that the collars (A) and (B) are properly inserted into the slots.



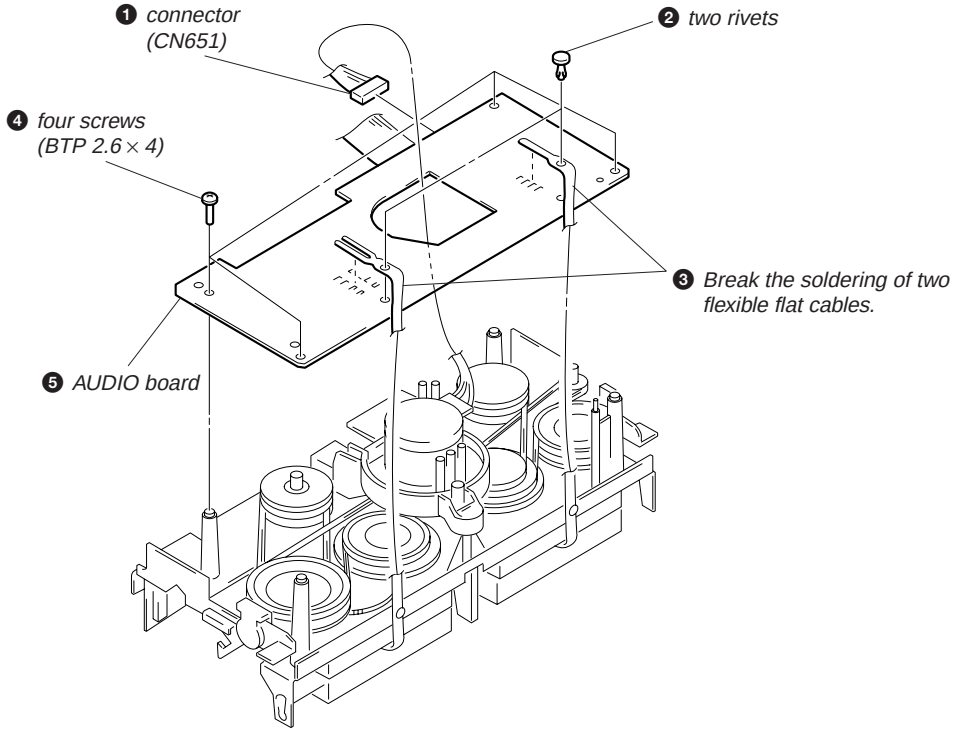
BD BOARD



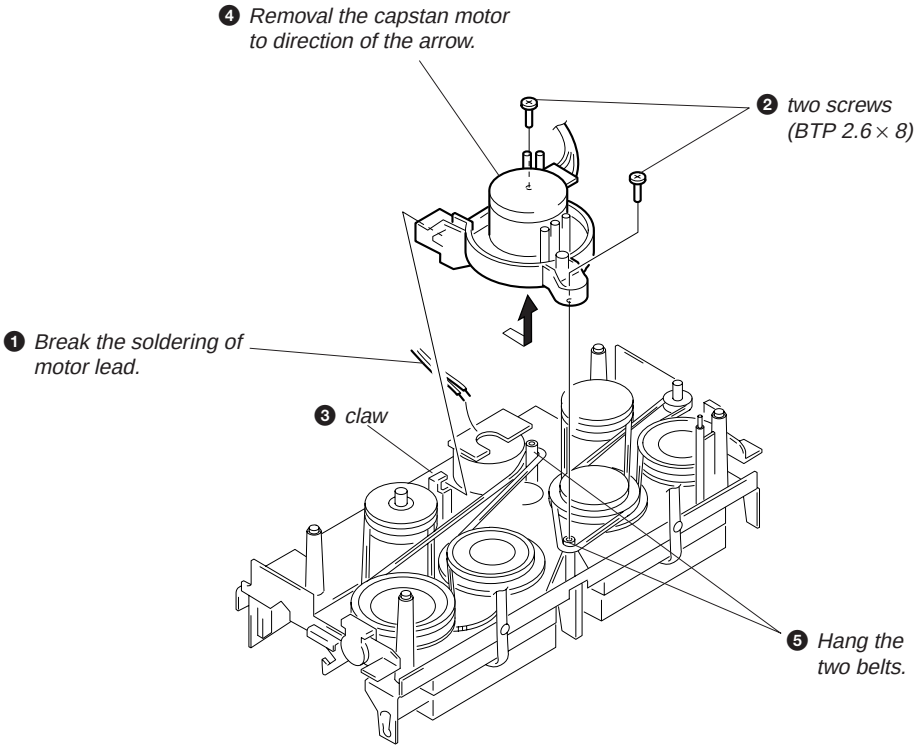
OPTICAL PICK-UP, SLED MOTOR



AUDIO BOARD



CAPSTAN MOTOR


❹ Removal the capstan motor to direction of the arrow.
❷ two screws (BTP 2.6 × 8)
❶ Break the soldering of motor lead.
❸ claw
❺ Hang the two belts.

SECTION 3
TEST MODE

[MC Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons [SPECTRUM ANALYZER], [ENTER/NEXT], and [DISC 1] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[CD Delivery Mode]

- This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [POWER] button to turn the set ON.
2. Press [PLAY] button and [POWER] button simultaneously.
3. A message "LOCK" is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

[MC Hot Reset]

- This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons [SPECTRUM ANALYZER], [ENTER/NEXT], and [DISC 2] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[Sled Servo Mode]

- This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Select the function "CD".
2. Press three buttons [SPECTRUM ANALYZER], [ENTER/NEXT], and [FUNCTION] simultaneously.
3. The Sled Servo mode is selected, if "CD" is blanking on the fluorescent indicator tube.
4. With the CD in stop status, press [▶▶] button in CD section to move the pickup to outside track, or [◀◀] button to inside track.
5. To exit from this mode, perform as follows:
   1) Move the pickup to the most inside track.
   2) Press three buttons in the same manner as step 2.

Note:

- Always move the pickup to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[Change-over of FUNCTION Name]

- The FUNCTION name of external input terminal can be changed over to VIDEO or MD.

Procedure:

1. Press [POWER] button to turn the set OFF.
2. Press [POWER] button together with [FUNCTION] button, and the power is turned on, the display of fluorescent indicator tube changes to "MD" or "VIDEO" instantaneously, and thus the FUNCTION is changed over.

[Change-over of AM Tuner Step between 9kHz and 10kHz]

- A step of AM channels can be changed over between 9kHz and 10kHz.

Procedure:

1. Press [POWER] button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "AM".
3. Press [POWER] button to turn the set OFF.
4. Press [ENTER/NEXT] and [POWER] buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9k STEP" or "AM 10k STEP", and thus the channel step is changed over.

[LED and Fluorescent Indicator Tube All Lit, Key Check Mode]

Procedure:

1. Press three buttons [SPECTRUM ANALYZER], [ENTER/NEXT], and [DISC 3] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on. Press [DISC 2] button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays "K 1 V0 J0". Each time a button is pressed, "K"value increases. However, once a button is pressed, it is no longer taken into account.
   "J" value increases like 1, 2, 3 ... if rotating [JOG] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "–" direction.
   "V" value increases like 1, 2, 3 ... if rotating [VOLUME] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "–" direction.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
  The aging operation stops.
- If no error occurs:
  The aging operation continues repeatedly.

1. Aging Mode in CD Section

1-1. Operating Method of Aging Mode

1. Set discs in DISC1 and DISC2 trays.
2. Select the function "CD".
3. Press three buttons [SPECTRUM ANALYZER], [ENTER/NEXT], and [KARAOKE PON/MPX] simultaneously.
4. The aging mode is activated, if a roulette mark on the fluorescent indicator tube is blinking.
5. In the aging mode, the aging is executed in a sequence given in "1-2. Operation during Aging Mode".
   The aging continues unless an alarm occurred.
6. To exit from the aging mode, press [POWER] button to turn the set OFF.

- If a button other than buttons In CD section is pressed during aging, the aging in the CD section is finished.
- To execute aging to the tape deck section successively, press [▷] button in the deck A.
  "AGING" is displayed on the fluorescent indicator tube. (For the aging in tape deck, see "2. Aging Mode in Tape Deck Section".

1-2. Operation during aging Mode

In the aging mode, the program is executed in the following sequence.

1. The disc table is ejected.
2. The disc tray turns to select a disc. (For a disc selection sequence, see Section 1-3.)
3. TOC of disc is read.
4. The pickup accesses to the last track.
5. A disc is ejected.
6. Steps 2 through 5 are repeated.

1-3. Disc Selection Sequence

- During the aging mode, discs are selected in the following sequence:

Disc 1 → Disc 2
↑ ↓
Disc 2 ← Disc 1

2. Aging Mode in Tape Deck Section

2-1. Operating Method of Aging Mode

1. Load a commercially available 10-minute tape into the decks A and B respectively.
   (If a 10-minute tape is not available, another tape may be used but a cycle time will be longer.)
2. Select the function "TAPE".
3. Rewind tapes in advance by pressing [◀◀] button respectively on decks A and B.
4. Press three buttons [SPECTRUM ANALYZER], [ENTER/NEXT], and [KARAOKE PON/MPX] simultaneously.
5. Press [▷] button on deck A. (This button triggers the aging mode.)
6. The aging mode is activated if "AGING A" is displayed on the fluorescent indicator tube.
7. In the aging mode, the aging is executed in a sequence given in "2-2. Operation during Aging Mode".
   The aging continues unless an alarm occurred.
8. To exit from the aging mode, press [POWER] button to turn the set OFF.

2-2. Operation during Aging Mode

In the aging mode, the program is executed in the following sequence.

1. A tape on FWD side is played for one minute.
2. PAUSE STOP is made.
3. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed. In this case, [▷] LED does not light up.)
4. FF is executed up to the end of tape.
5. A tape is reversed, and the tape on REV side is played for one minute.
6. PAUSE STOP is made.
7. Recording is made for 3 minutes. (For the deck not having the record function, the play is executed. In this case, [◁] LED does not light up.)
8. FF is executed up to the end of tape.
9. Steps 1 through 8 are executed for the other deck.
10. Steps 1 through 9 are repeated unless an alarm occurred.

2-3. Deck Selection Sequence

- During the aging mode, decks are selected in the following sequence:

Deck A (FWD) → Deck A (REV)
↑ ↓
Deck B (REV) ← Deck B (FWD)

SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
   record/playback head — pinch roller
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	36 to 61 g•cm (0.50 – 0.84 oz•inch)
Forward Back Tension	CQ-102C	2 to 6 g•cm (0.026 – 0.082 oz•inch)
Reverse	CQ-102RC	36 to 61 g•cm (0.50 – 0.84 oz•inch)
Reverse Back Tension	CQ-102RC	2 to 6 g•cm (0.026 – 0.082 oz•inch)
FF, REW	CQ-201B	61 to 143 g•cm (0.85 – 1.98 oz•inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 100 g (3.53 oz)
Reverse	CQ-403R	more than 100 g (3.53 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

DECK SECTION | 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-ch.
7. Switches and controls should be set as follows unless otherwise specified.
8. Set to test mode. (Press key switch same time SPECTRUM ANALYZER ENTER/NEXT and EFFECT ON/OFF button.)

• Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

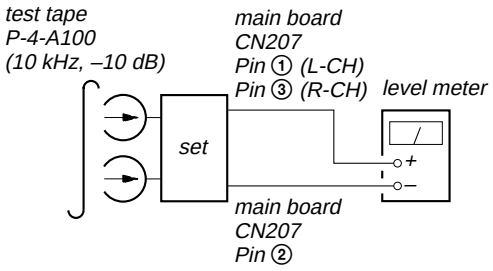
Record/Playback Head Azimuth Adjustment

DECK A | **DECK B**

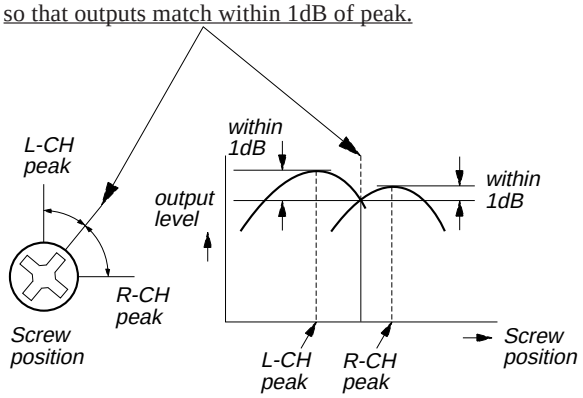
Note: Perform this adjustments for both decks

Procedure:

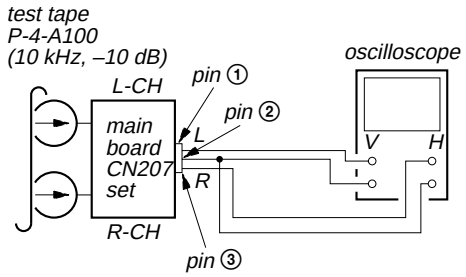
1. Mode: Playback (FWD)

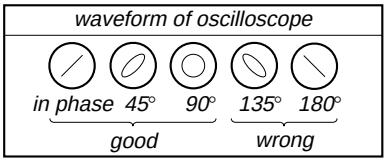


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



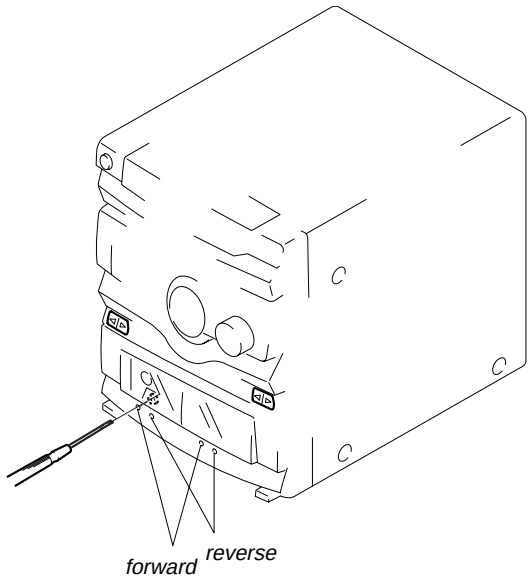
3. Mode: Playback (FWD)





4. Repeat steps 1 to 3 in playback (REV) mode.
5. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Record/Playback Head (Deck A and B) and main board.



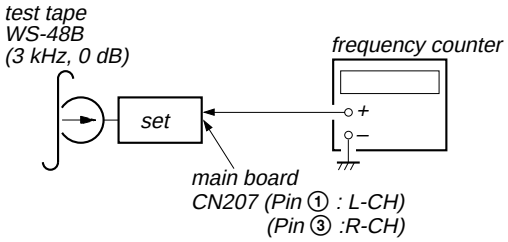
Tape Speed Adjustment DECK A

Note: Start the Tape Speed adjustment as below after setting to the test mode.
In the test mode, the tape speed is high during pressing the HIGH SPEED DUBBING button.

Procedure:

1. Turn the power switch on.
2. Press the SPECTRUM ANALYZER button, ENTER/NEXT button and EFFECT ON/OFF button simultaneously.
   To exit from the test mode, press the POWER button.

Mode: Playback (FWD)



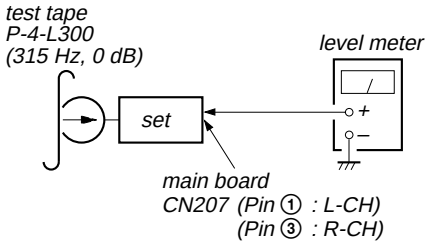
1. Insert the WS-48B into the deck A and the blank tape into the deck B.
2. Press the REC button and ▷ button on the deck B. Then the deck B is at recording mode.
3. Set the deck A to playback mode.
4. Keep pressing the HIGH SPEED DUBBING button in playback mode.
   Then at HIGH speed mode.
5. Adjust RV652 on the AUDIO board do that frequency counter reads 6,000 ± 60 Hz.
6. Take off the HIGH SPEED DUBBING button.
   Then at NORMAL speed mode.
7. Adjust RV651 on the AUDIO board so that frequency counter reads 3,000 $^{+30}_{-10}$ Hz.
8. Frequency difference between deck A and deck B the beginning of the tape should be within ± 1.5%.

Adjustment Location: AUDIO board

Playback level Adjustment DECK A DECK B

Procedure:

Mode: Playback (FWD)



Deck A is RV311 (L-CH) and RV411 (R-CH), Deck B is RV301 (L-CH) and RV401 (R-CH) so that adjustment within adjustment level as follows.

Adjustment Level:

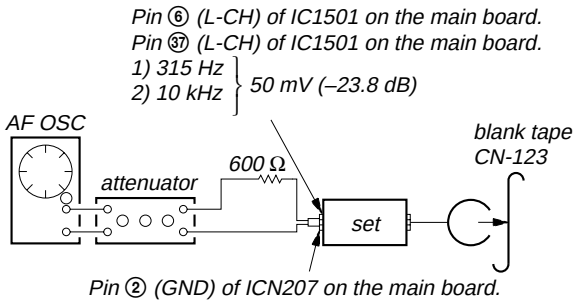
CN207 PB level: 301.5 to 338.3 mV (–8.2 to –7.2 dB) level difference between the channels: within ±0.5 dB

Adjustment Location: AUDIO and main boards

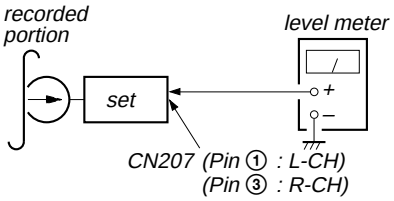
Record bias Current Adjustment **DECK B**

Procedure:

1. Mode: Record



2. Mode: Playback



Confirm playback the signal recorded in step 1 become adjustable limits as follows.

If these levels do not adjustable limits, adjustment the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 1 and 2.

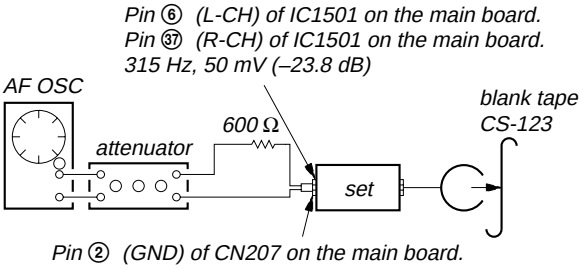
Adjustable limits: Playback output of 315 Hz to playback output of 10kHz: ±0.5 dB

Adjustment Location: AUDIO and main boards

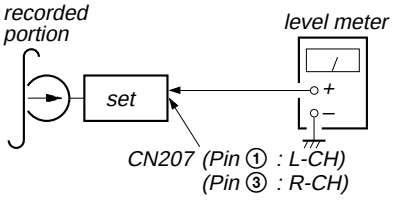
Record Level Adjustment **DECK B**

Procedure:

1. Mode: Record


Pin ⑥ (L-CH) of IC1501 on the main board.
Pin ㊲ (R-CH) of IC1501 on the main board.
315 Hz, 50 mV (–23.8 dB)
AF OSC
attenuator
600 Ω
set
blank tape
CS-123
Pin ② (GND) of CN207 on the main board.

2. Mode: Playback



Confirm playback the signal recorded in step 1 become adjustable limits as follows.

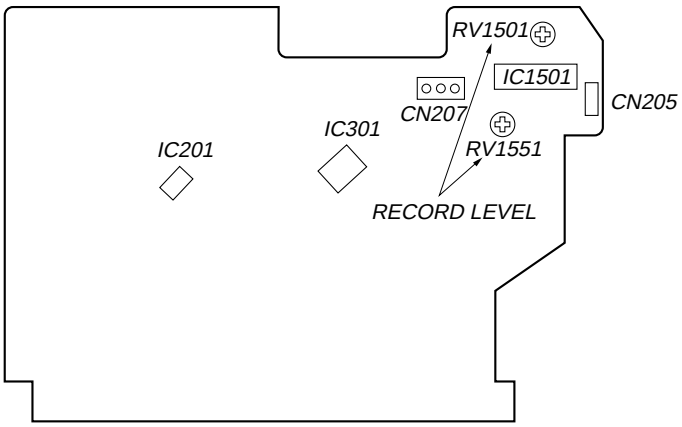
If these levels do not adjustable limits, adjustment the RV1501 (L-CH) and RV1551 (R-CH) on the main board to repeat steps 1 and 2.

Adjustable limits:

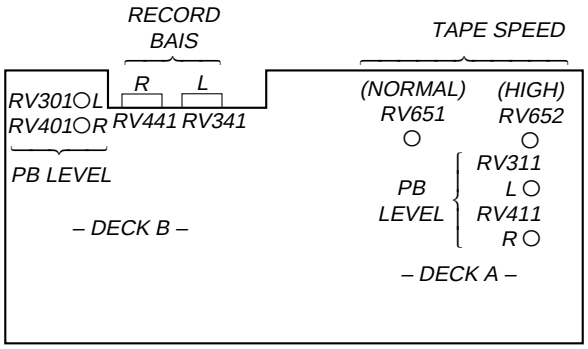
CN207 PB level: 47.3 to 53.1 mV (–24.3 to –23.3 dB)

Adjustment Location: Main board

[MAIN BOARD] (Component Side)



[AUDIO BOARD] (Conductor Side)

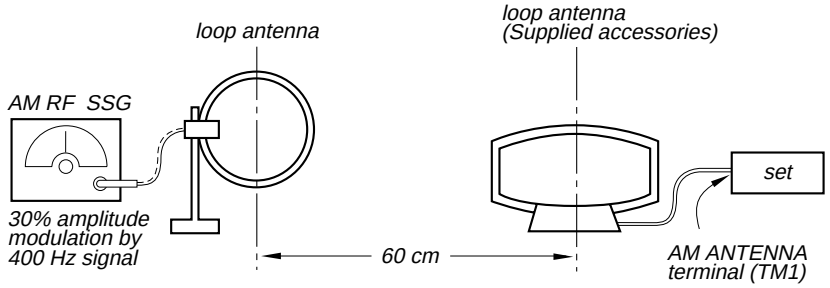


TUNER SECTION | 0 dB=1 µV

Note: As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

AM Section Adjustment

Setting:



Field strength dB (µV/m) =SSG output level dB (µV/m) –26 dB.

AM Tuned Level Adjustment

Band: AM or MW

Procedure:

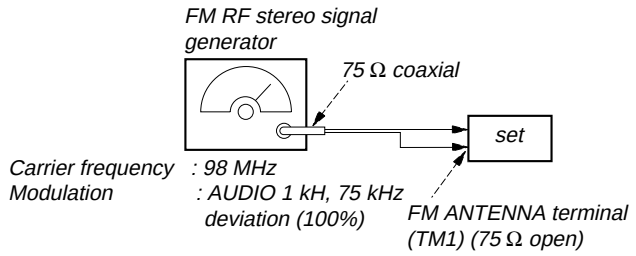
1. Set the output of SSG so that the input level of the set becomes 55 dB.
2. Tune the set to 999 kHz.
3. Adjust RV41 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location : TCB board

FM Section Adjustment

Note: This adjustment should be performed after the AM Tuned Level Adjustment due to the same adjustment element.

Setting:



FM Tuned Level Adjustment

Band: FM

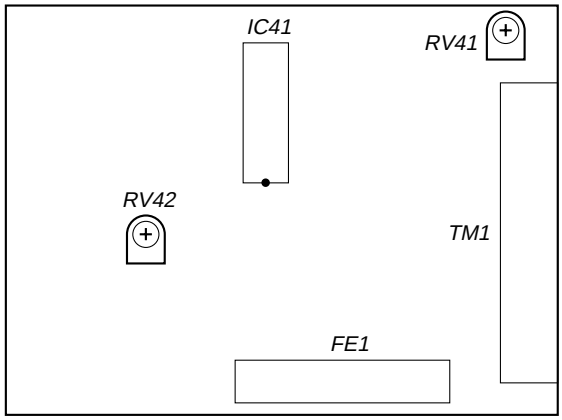
Procedure:

1. Supply a 25 dBµ 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. If the TUNED indicator does not light, adjust RV42 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location: TCB board

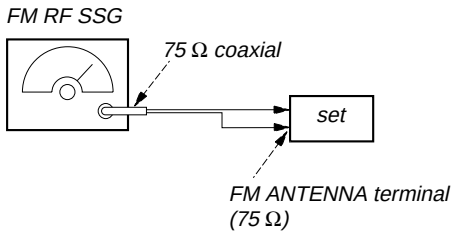
Adjustment Location:

[TCB BOARD] (Component Side)



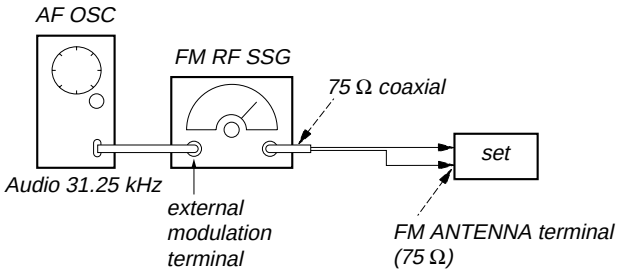
FM Polar Adjustment (EE, CIS model only)

Connection 1:



Carrier frequency : 69 MHz
Output level : 1 mV (60 dBμ) (at 75 Ω open)
Modulation : AUDIO 1 kHZ, 10 kHz deviation

Connection 2:



Carrier frequency : 69 MHz
Output level : 1 mV (60 dBμ) (at 75 Ω open)
Modulation : AUDIO 31.25 kHZ, 10 kHz deviation
(EXTERNAL MODULATION)

Procedure :

1. Set the modulation of FM RF SSG to AUDIO 1 kHz, 10 kHz deviation according to "Connection 1".
2. Tune the set to 69 MHZ.
3. Adjust the RV1702 so that the reading of frequency counter connected to TP1702 becomes within 31.25 kHz ± 0.05 kHz. (VCO adjustment)
4. Then record the reading of the level meter connected to TP1701
5. Set the modulation of FM RF SSG to AUDIO 31.25 kHz, 10 kHz deviation according to "Connection 2".
6. Tune the set to 69 MHz.
7. Set the CT1701 to be mechanical center.
8. Adjust the L1701 so that the reading of the level meter connected to TP1701 become maximum.
   Then adjust the CT1701 so that the reading of the level meter connected to TP1701 becomes maximum. (SUB CARRIER PEAK Adjustment)
9. Adjust the RV1701 so that the level at the moment becomes 14 dB higher value than the level recorded in step 4. (SUB CARRIER LEVEL Adjustment)

Adjustment Location :
EE, CIS model :
[TCB BOARD] (Component Side)

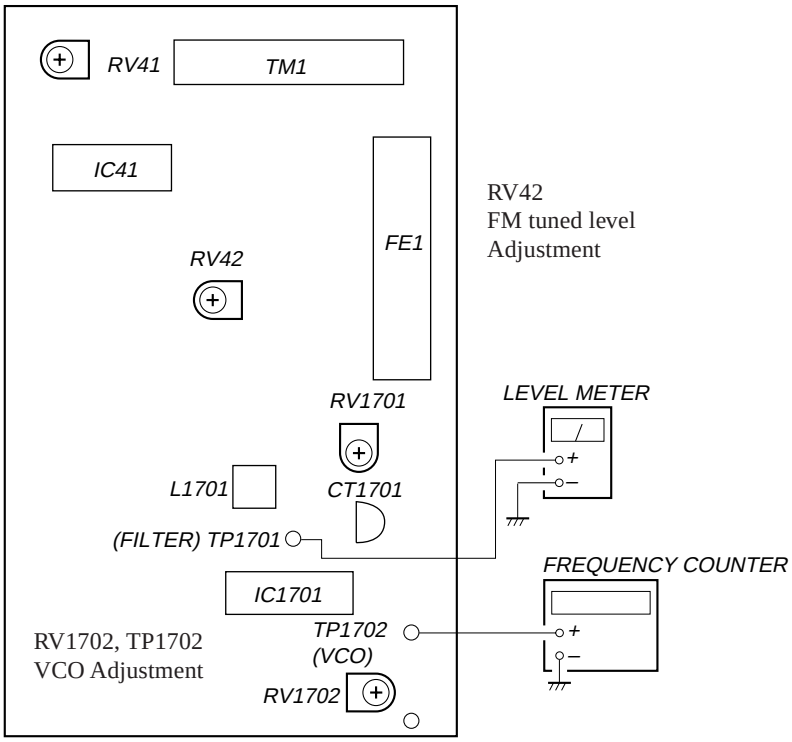
• Abbreviation
EE: East European model

RV41
AM tuned level
Adjustment

RV1701, TP1701
Sub carrier level
Adjustment

CT1701, L1701, TP1701
Sub carrier peak
Adjustment

RV1702, TP1702
VCO Adjustment

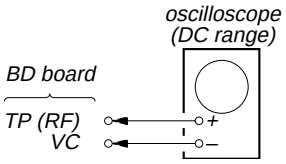


CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10M impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

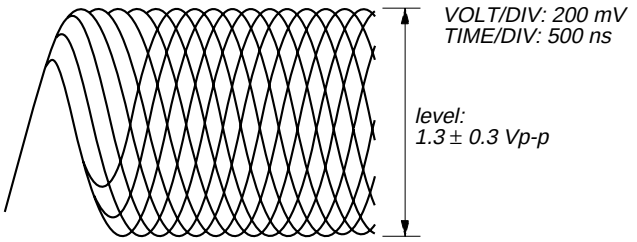
Focus Bias check



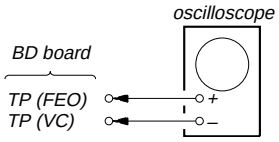
Procedure:

1. Connect oscilloscope to test point TP (RF). (GND terminal : VC)
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that the shape "◇" can be clearly distinguished at the center of the waveform and check the RF signal level.

• RF signal



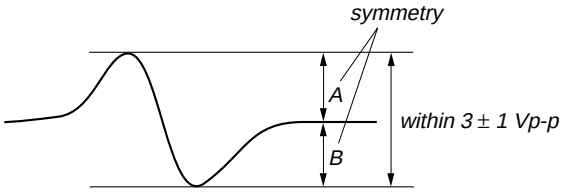
S Curve Check



Procedure:

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.

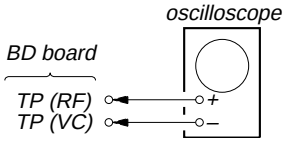
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note: • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



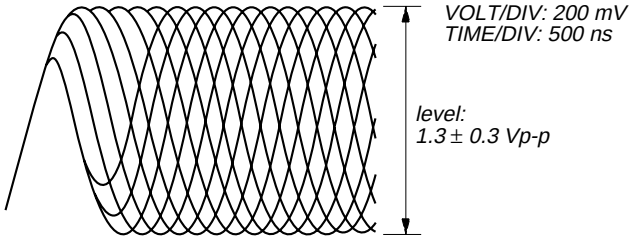
Procedure:

1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

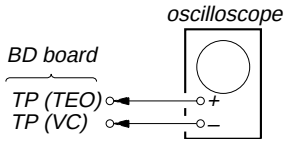
Note:

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

• RF signal



E-F Balance (1 Track Jump) check
(Without remote commander)

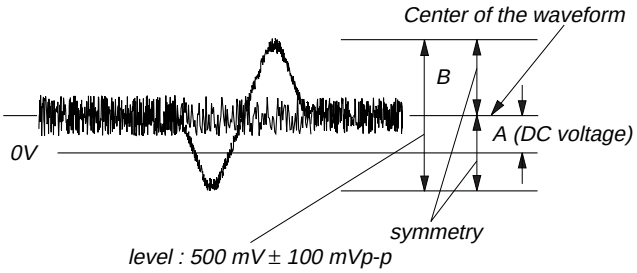


Procedure:

1. Connect oscilloscope to test point TP (TEO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the "▮▮ (Pause)" button. (Becomes the 1 track jump mode)
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following:

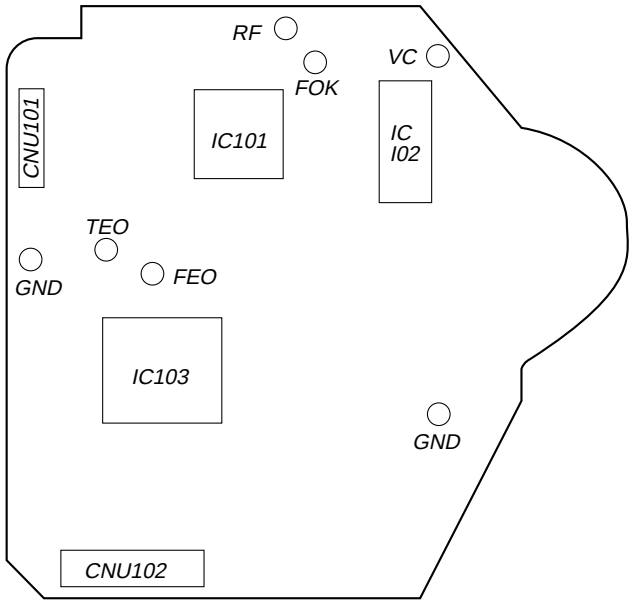
$$\frac{A - B}{2\,(A + B)} \times 100 = \pm 7\ (\%)$$

1 track jump waveform



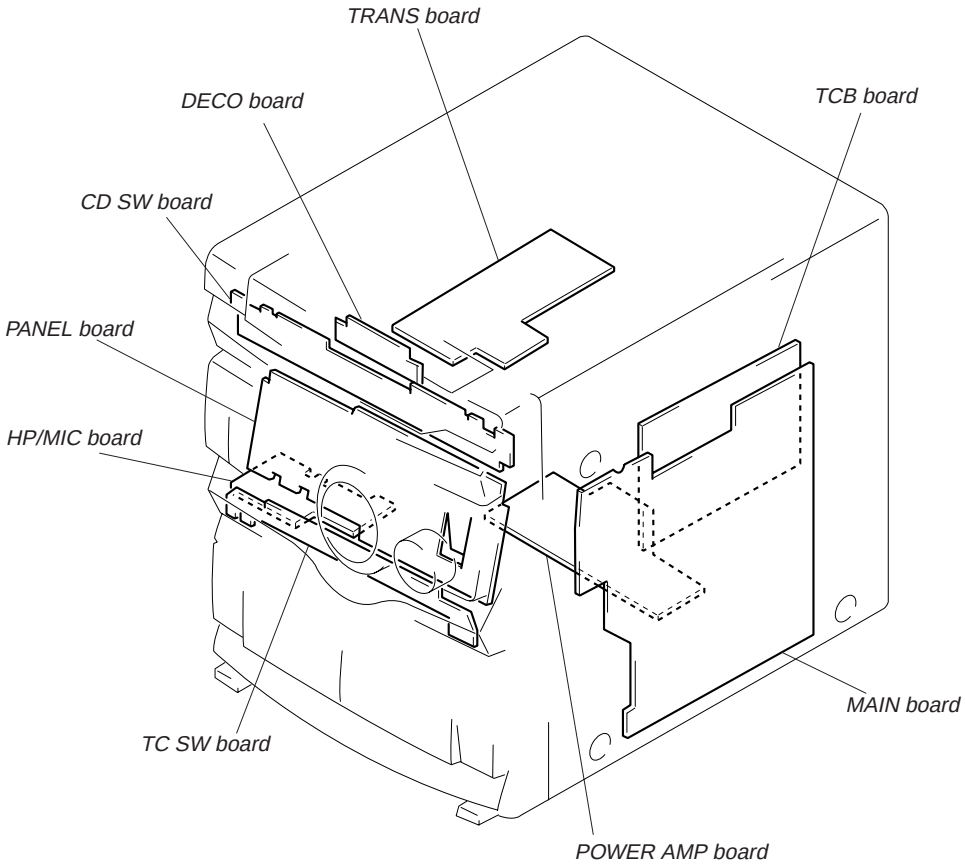
Adjustment Location:

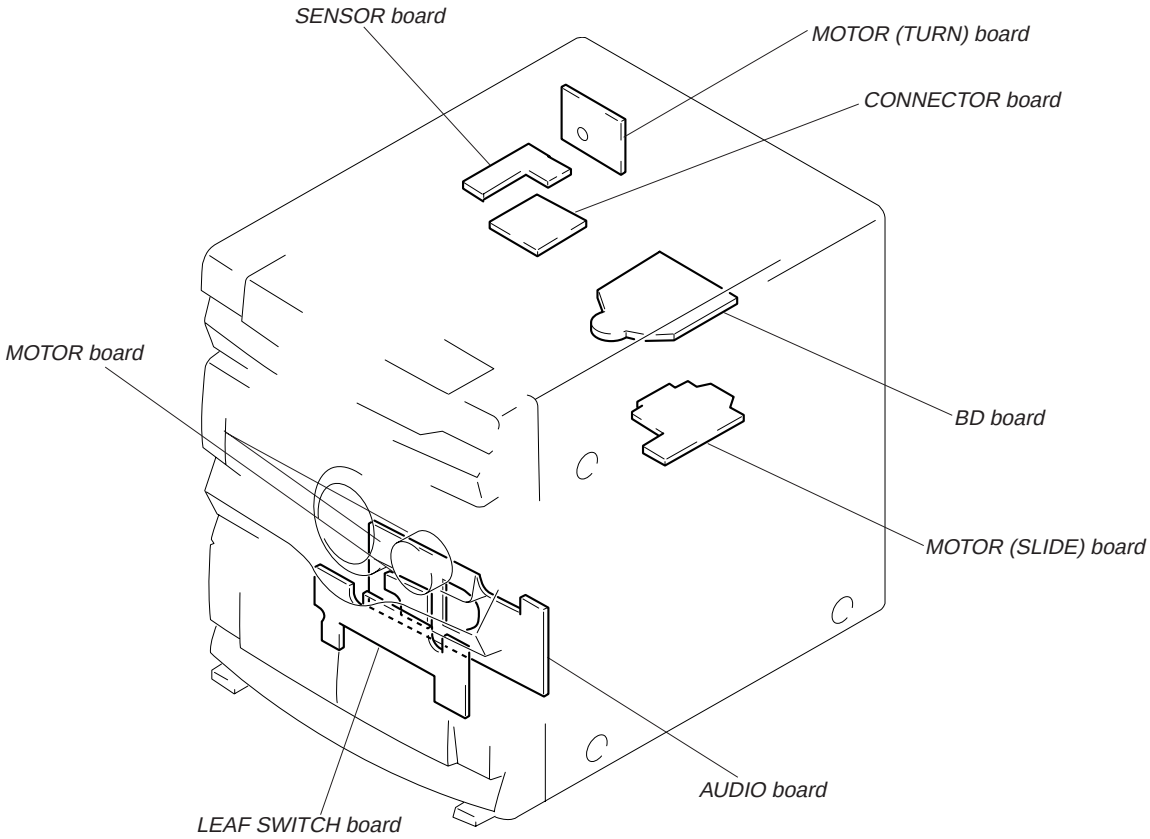
[BD BOARD] (Conductor Side)



SECTION 6
DIAGRAMS

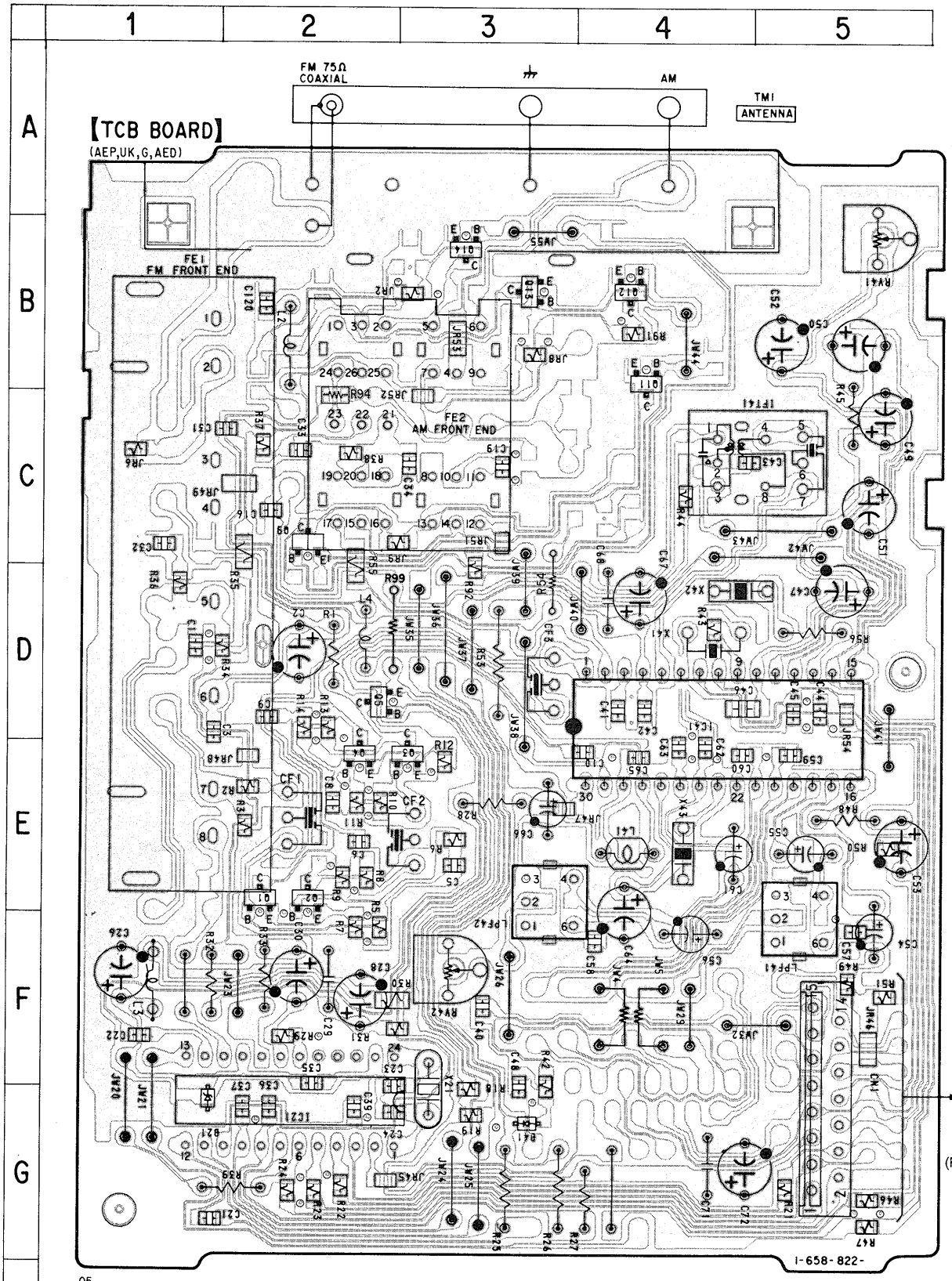
- **Circuit Boards Location**





6-1. PRINTED WIRING BOARD – TUNER Section –

(AEP, UK, G, AED) • **See page 37 for Circuit Boards Location.**



• **Semiconductor Location**

Ref. No.	Location
D21	G-1
D41	G-3
IC21	G-2
IC41	D-4
Q1	E-2
Q2	E-2
Q3	E-3
Q4	E-2
Q5	D-2
Q9	C-2
Q11	B-4
Q12	B-4
Q13	B-3
Q14	B-3

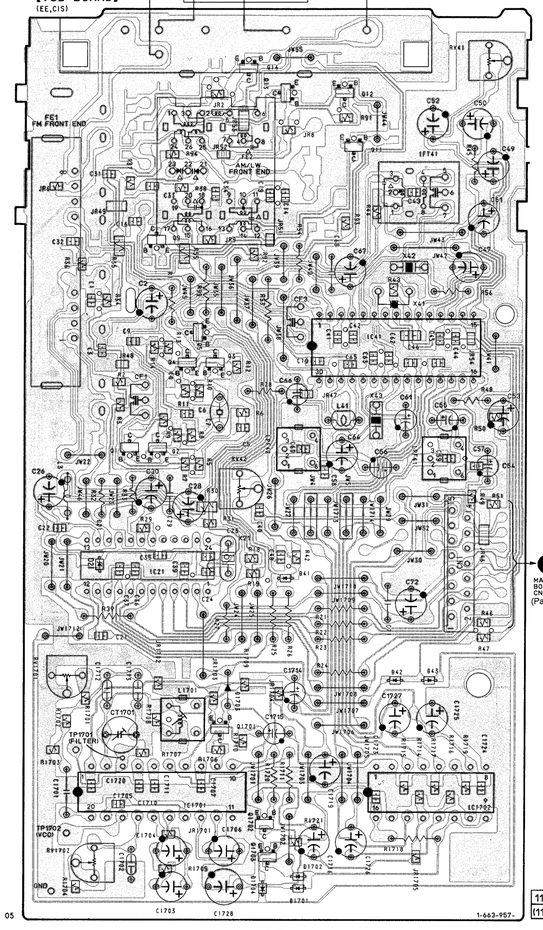
Note on Printed Wiring Board:

- ⟷ : parts extracted from the component side.
- △ : internal component.
- Abbreviation
  AED : Northern European model
  G : Geman model

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- △ : internal component.
- Abbreviation
  EE : East European model

【TCB BOARD】
(EE,CIS)

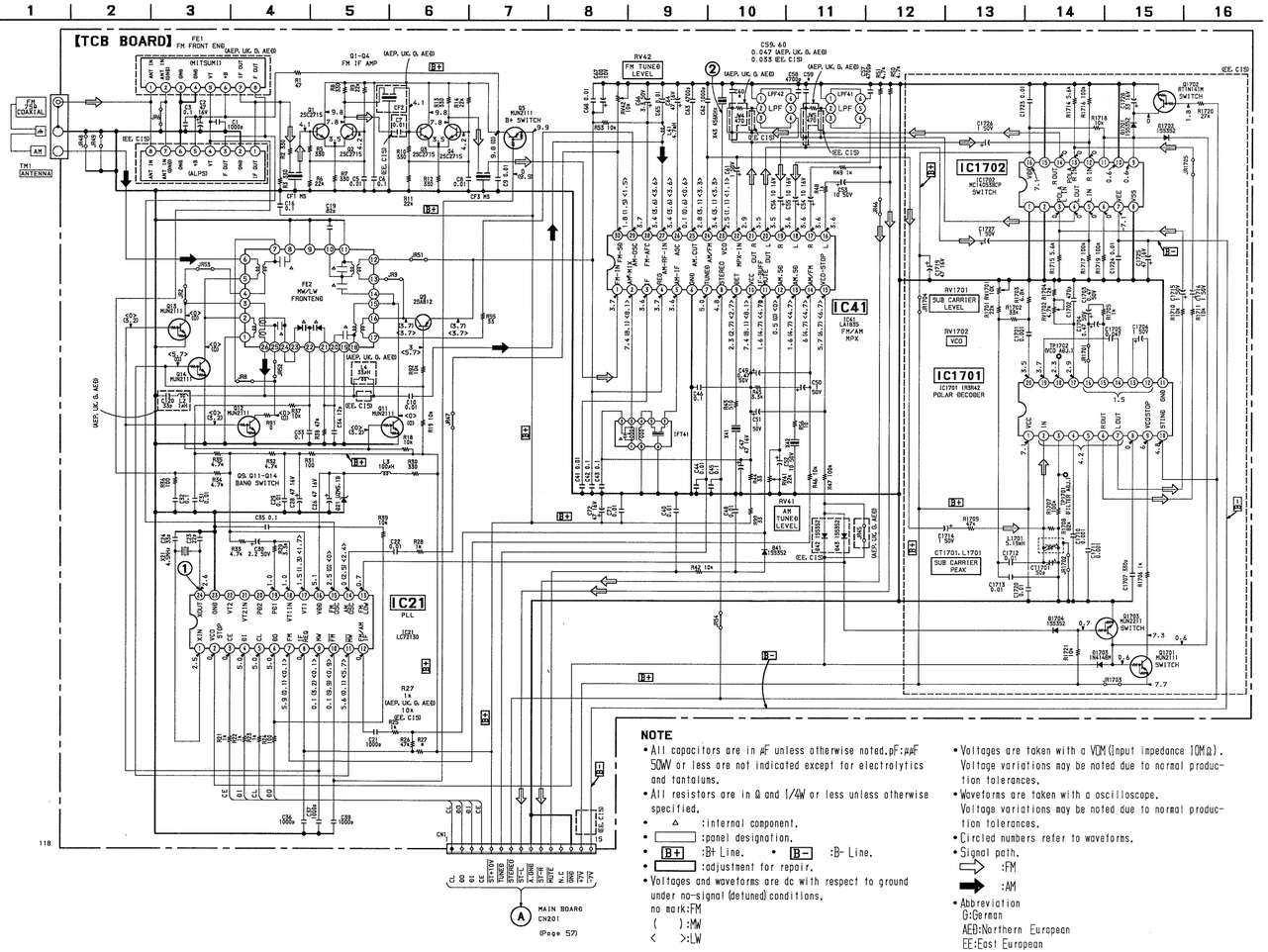


• Semiconductor Location

Ref. No.	Location
D21	G-2
D41	G-4
D42	H-5
D43	H-5
D1701	J-4
D1702	J-4
D1703	H-4
D1704	J-4
IC21	G-3
IC41	E-5
IC1701	I-3
IC1702	I-6
Q1	F-3
Q2	F-3
Q3	E-3
Q4	E-3
Q5	E-3
Q9	D-3
Q11	C-5
Q12	B-5
Q13	B-4
Q14	B-4
Q1701	I-3
Q1702	I-4
Q1703	J-4

6-2. SCHEMATIC DIAGRAM – TUNER Section – • See page 76 for IC Block Diagrams.

【TCB BOARD】

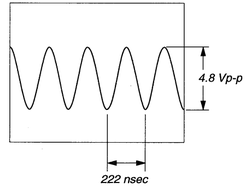


NOTE

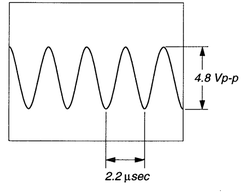
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line. • B− : B− Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): MW
  < >: LW
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
- Abbreviation
  G: German
  AED: Northern European
  EE: East European

• Waveforms

❶ IC21 ㉔ pin (X OUT)

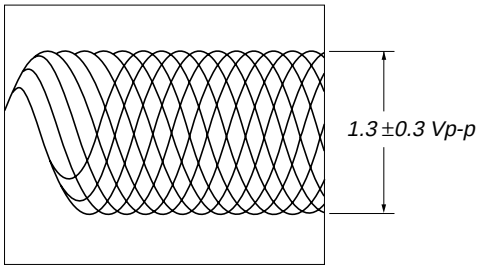


❷ IC41 ㉓ pin (VCO)

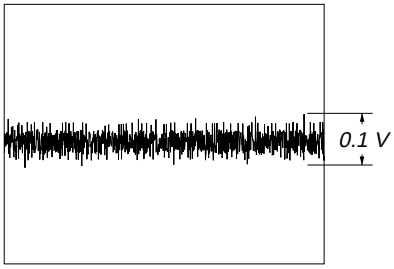


• **Waveforms**

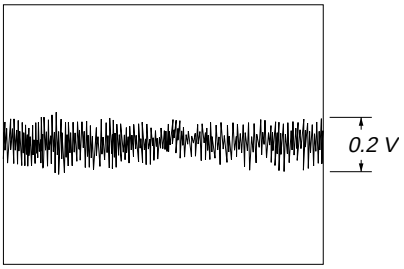
❶ IC101 ㉝ pin (RF_O)



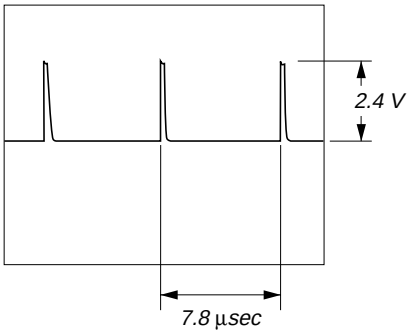
❷ IC101 ② pin (FEI)



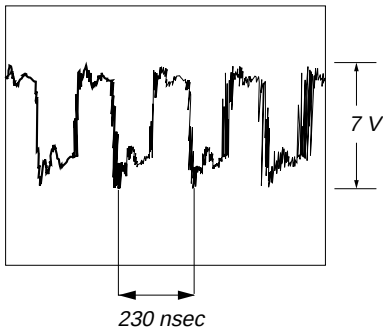
❸ IC101 ㊼ pin (TEI)



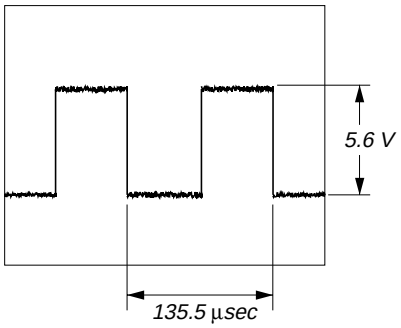
❹ IC103 ㉗ pin (MDP)



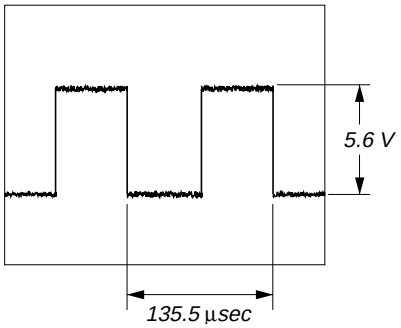
❺ IC103 ⑥⓪ pin (XPCK)



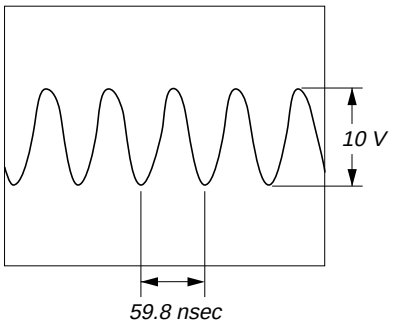
❻ IC103 ⑥② pin (RFCK)



❼ IC103 ⑦④ pin (WFCK)



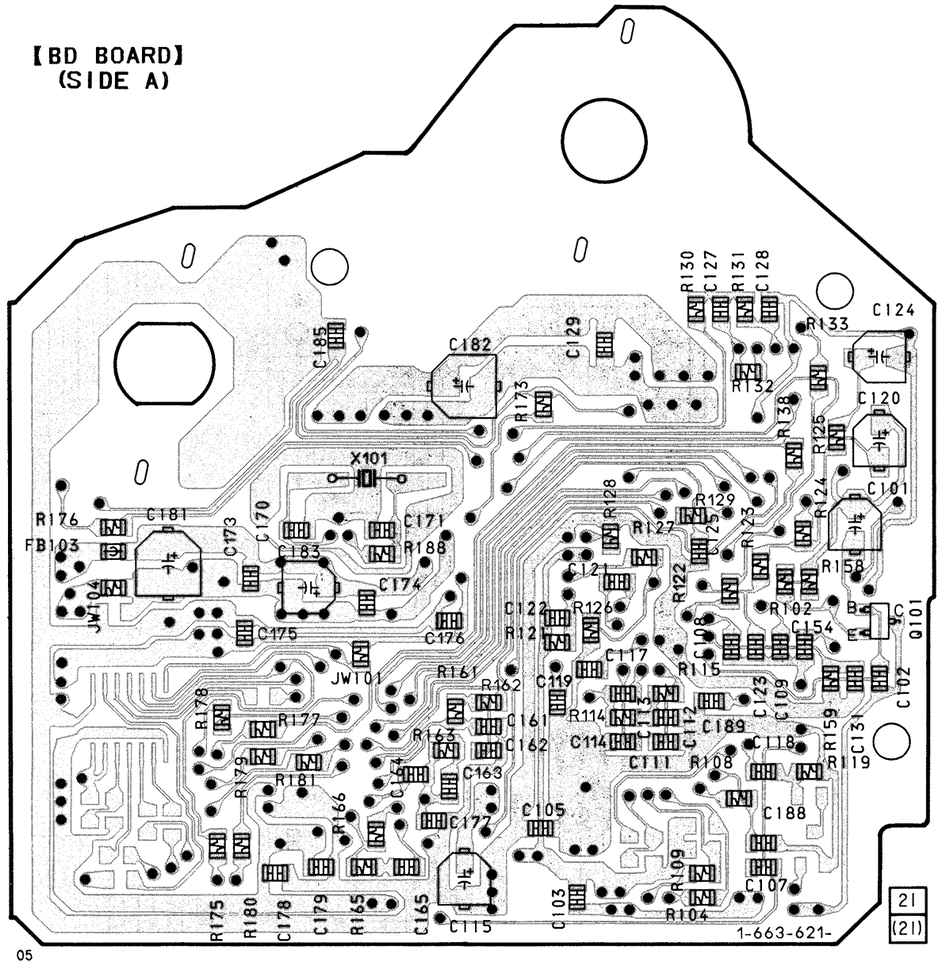
❽ IC103 ⑧⑨ pin (XTAI)



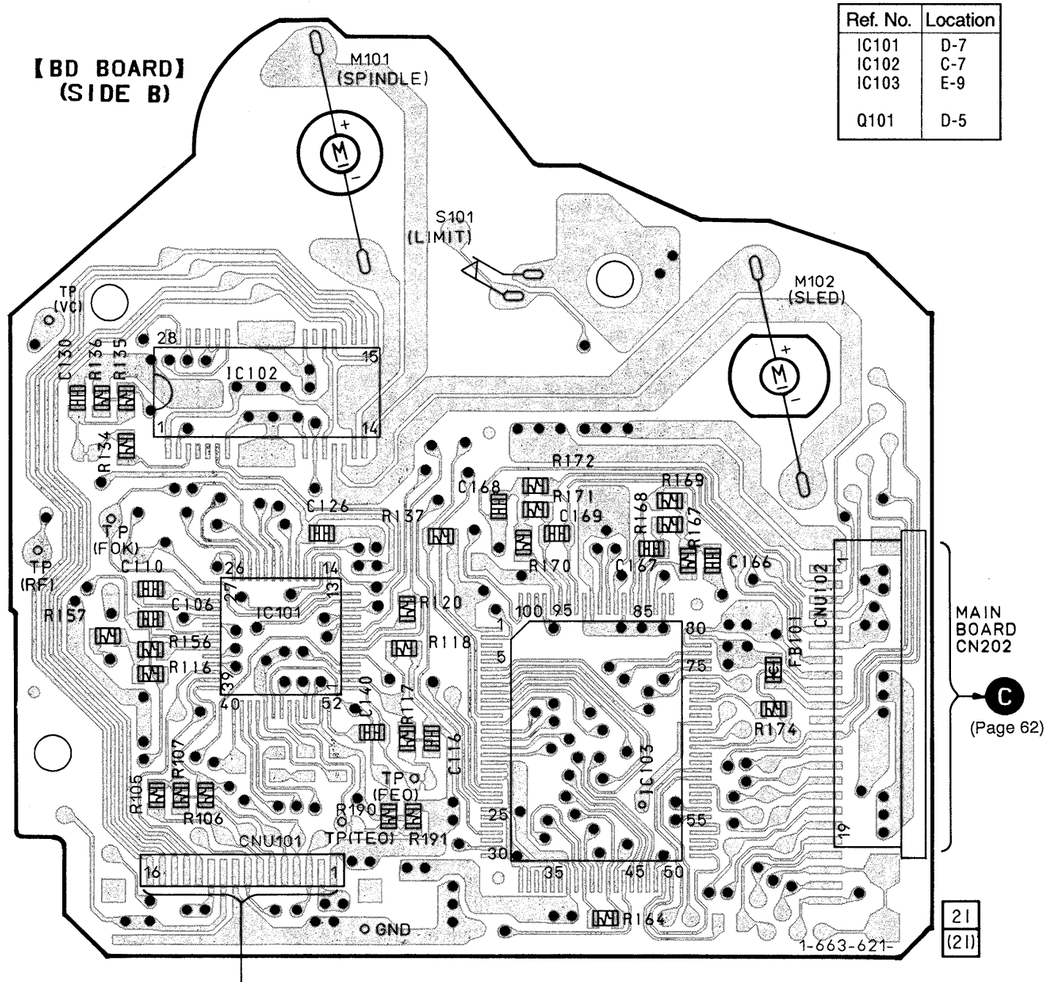
• **Semiconductor Location**

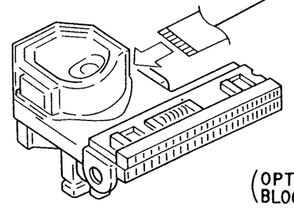
Ref. No.	Location
IC101	D-7
IC102	C-7
IC103	E-9
Q101	D-5

【BD BOARD】
(SIDE A)



【BD BOARD】
(SIDE B)

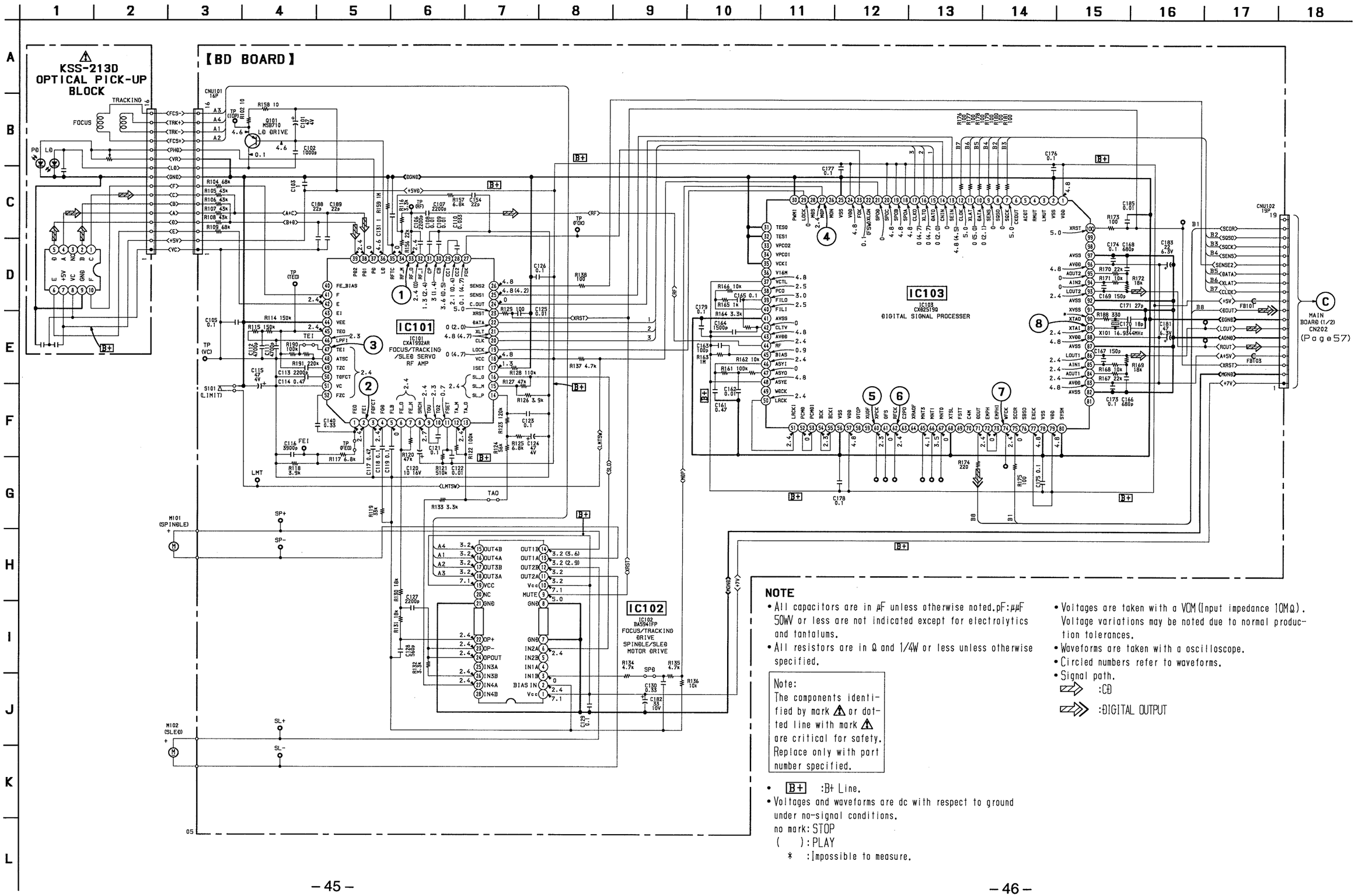




(OPTICAL PICK-UP
BLOCK KSS-213D)

Note on Printed Wiring Board:
- o——— : parts extracted from the component side.

6-4. SCHEMATIC DIAGRAM – CD Section – • See page 76 for IC Block Diagrams.

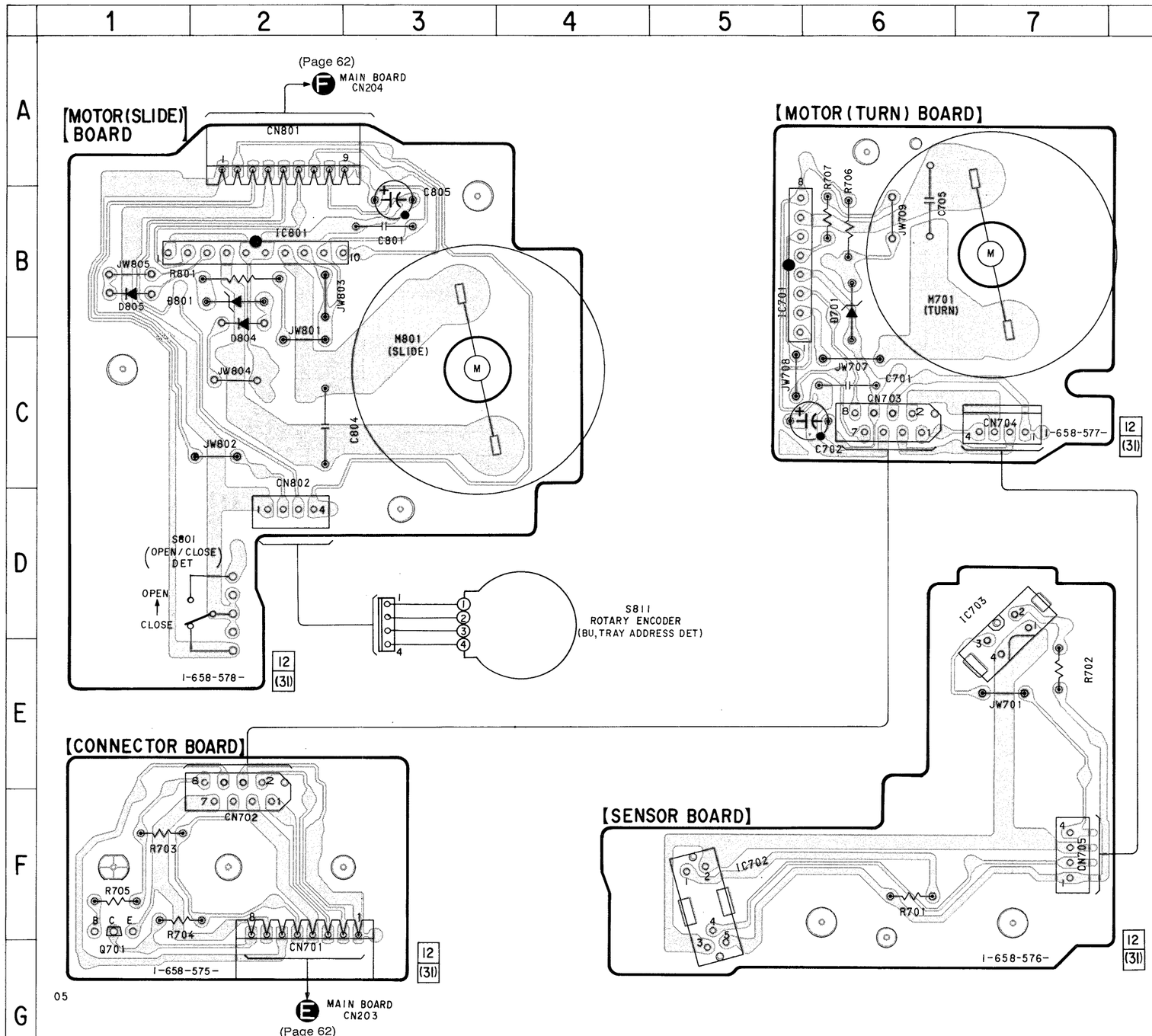


6-5. PRINTED WIRING BOARDS – CD MOTOR Section –

• See page 37 for Circuit Boards Location.

• Semiconductor Location

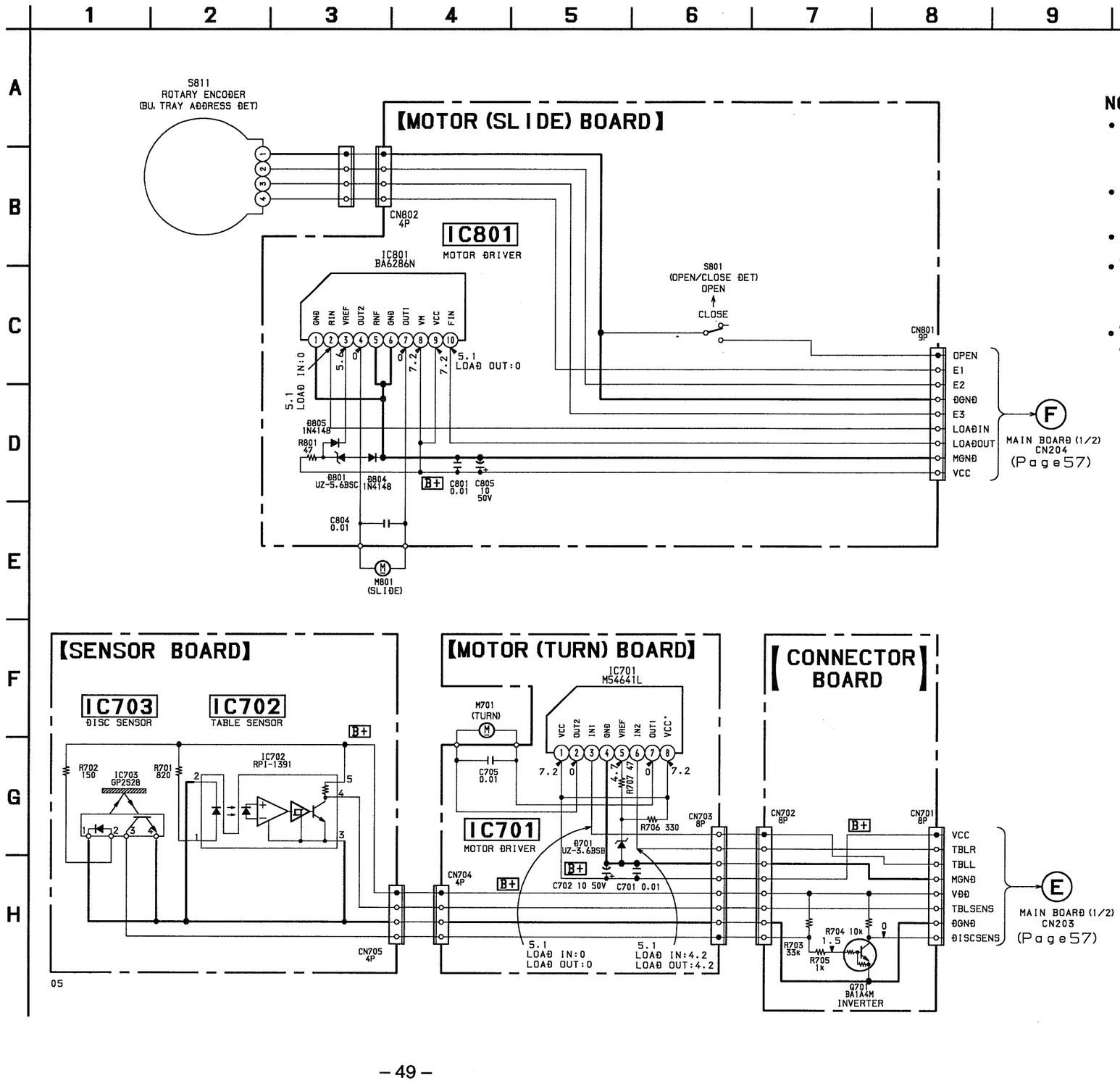
Ref. No.	Location
D701	B-6
D801	B-2
D804	B-2
D805	B-1
IC701	B-5
IC702	F-5
IC703	D-7
IC801	B-2
Q701	F-1



Note on Printed Wiring Board:

• ⟷ : parts extracted from the component side.

6-6. SCHEMATIC DIAGRAM – CD MOTOR Section – • See page 76 for IC Block Diagrams.



NOTE

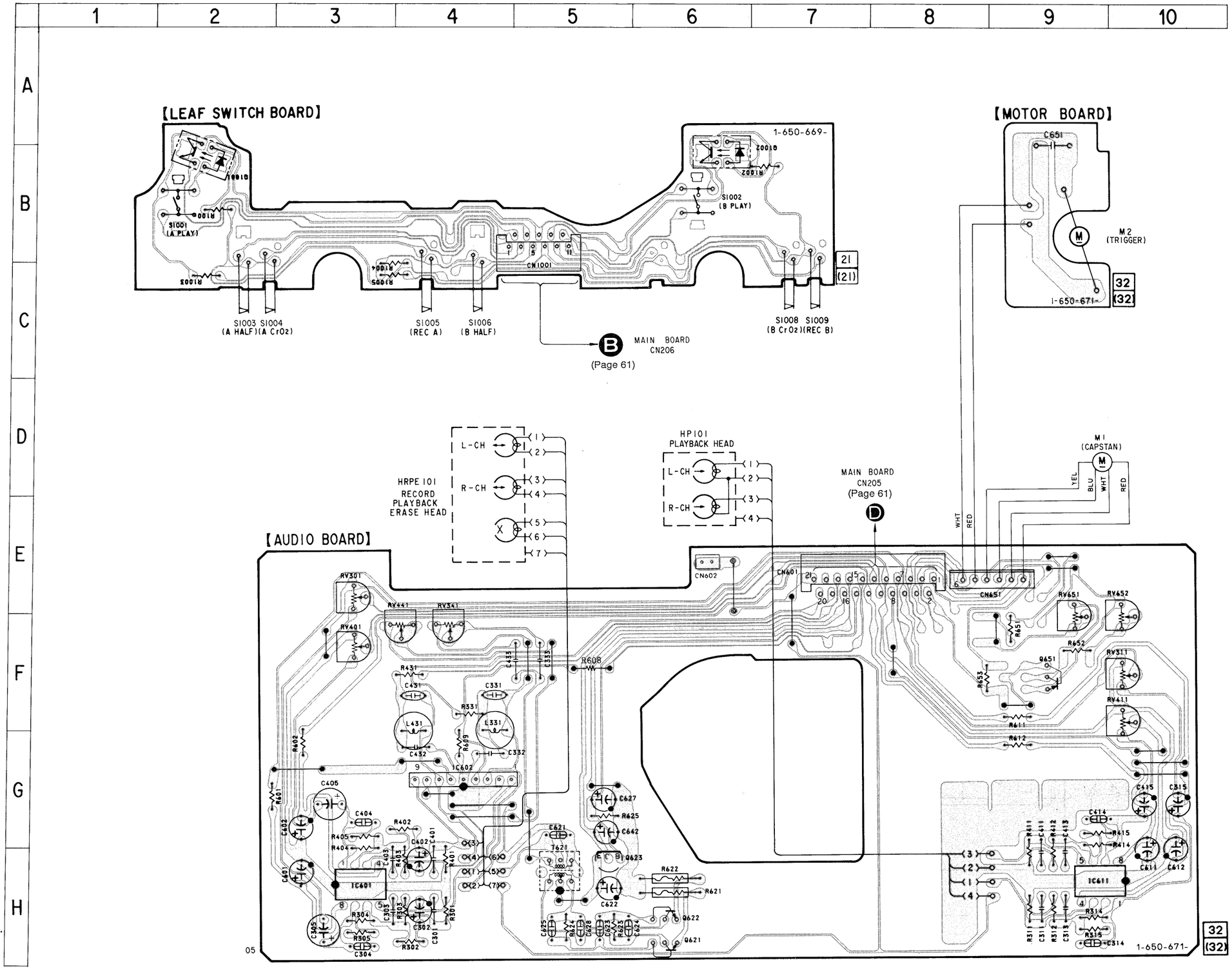
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- B+ :B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

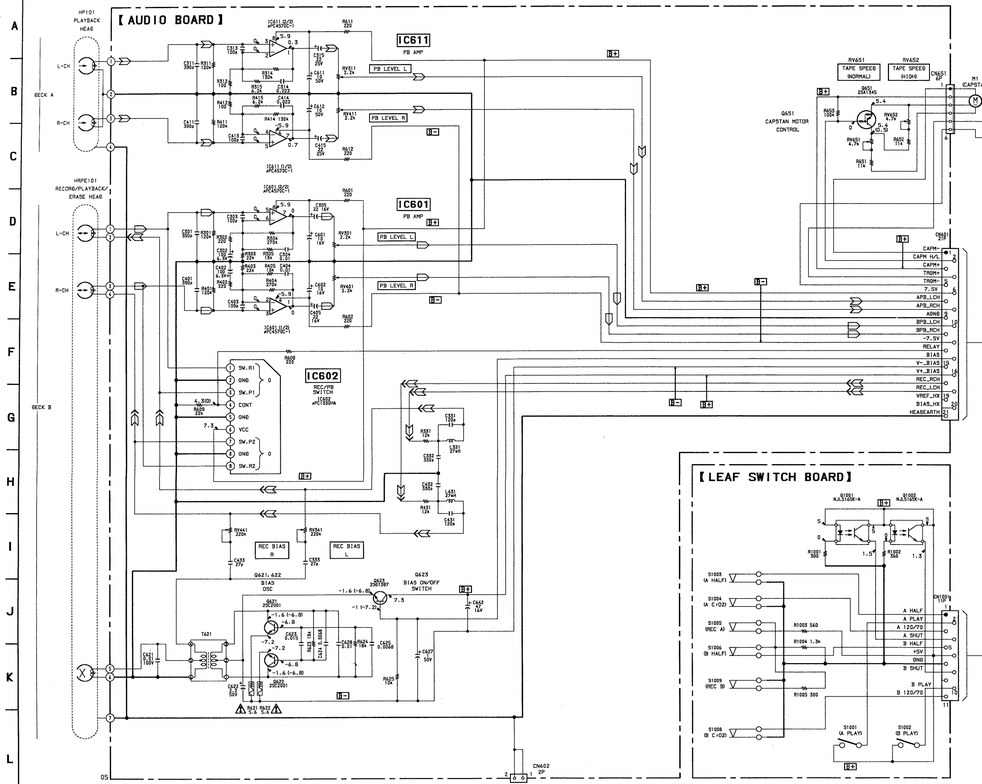
6-7. PRINTED WIRING BOARDS – DECK Section – • See page 37 for Circuit Boards Location.

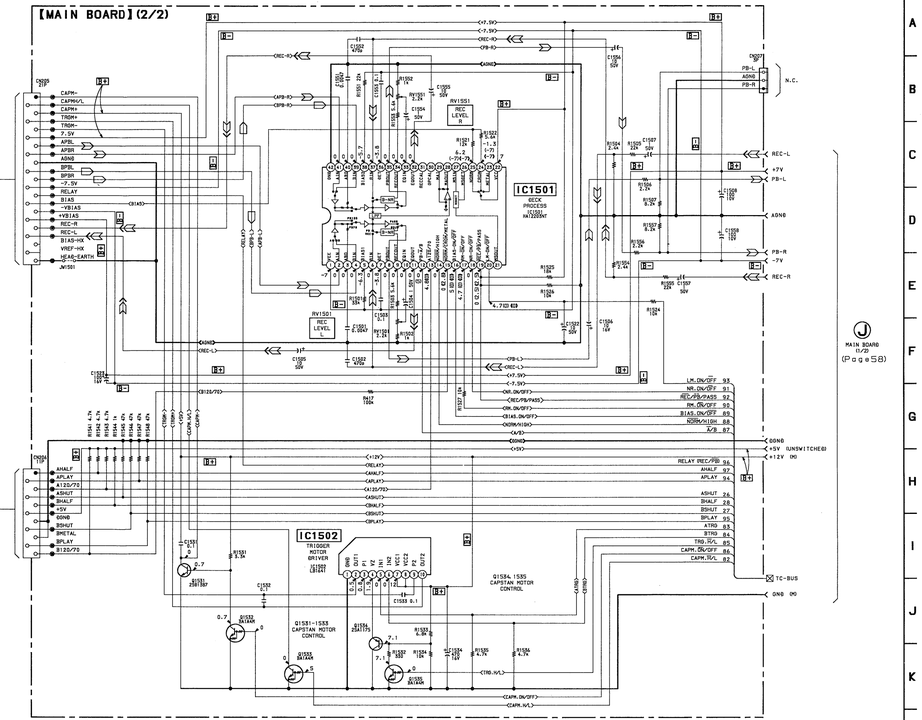
• Semiconductor Location

Ref. No.	Location
IC601	H-3
IC602	G-4
IC611	H-9
Q621	H-6
Q622	H-6
Q623	H-5
Q651	F-9
Q1001	B-2
Q1002	B-6

Note on Printed Wiring Board:
• o—— : parts extracted from the component side.







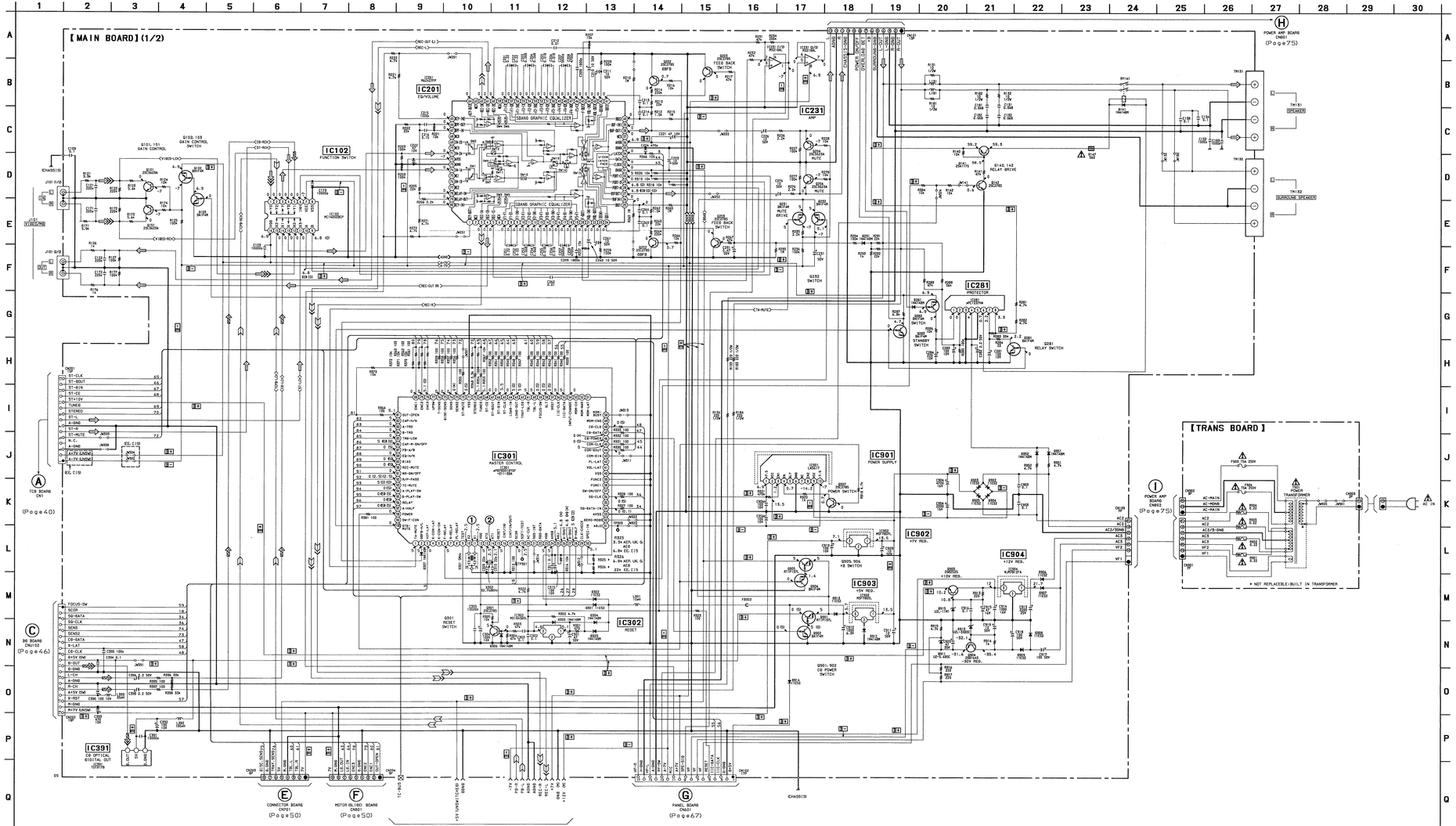
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

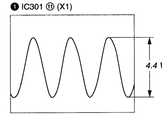
- : B+ Line.
- : B- Line.
- : adjustment for repair.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark : REC (DECK B)
  ( ) : PB (DECK B)
  << >> : PB (DECK A)
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : PB (DECK A)
  : REC (DECK B)
  : PB (DECK B)

6-9. SCHEMATIC DIAGRAM – MAIN/POWER Section – • See page 76 for IC Block Diagrams.

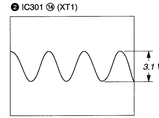


• Waveforms

❶ IC301 ⑰ (X1)



❷ IC301 ⑲ (XT1)



Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B− : B− Line.
- : panel designation.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : CD
  << >> : REC (DECK B)
  [ ] : PB (DECK B)
  { } : PB (DECK A)
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : FM
  : PB (DECK A)
  : REC (DECK B)
  : CD
  : DIGITAL OUT
  : VIDEO
- Abbreviation
  AED : Northern European model
  EE : East European model
  G : German model

• Semiconductor Location

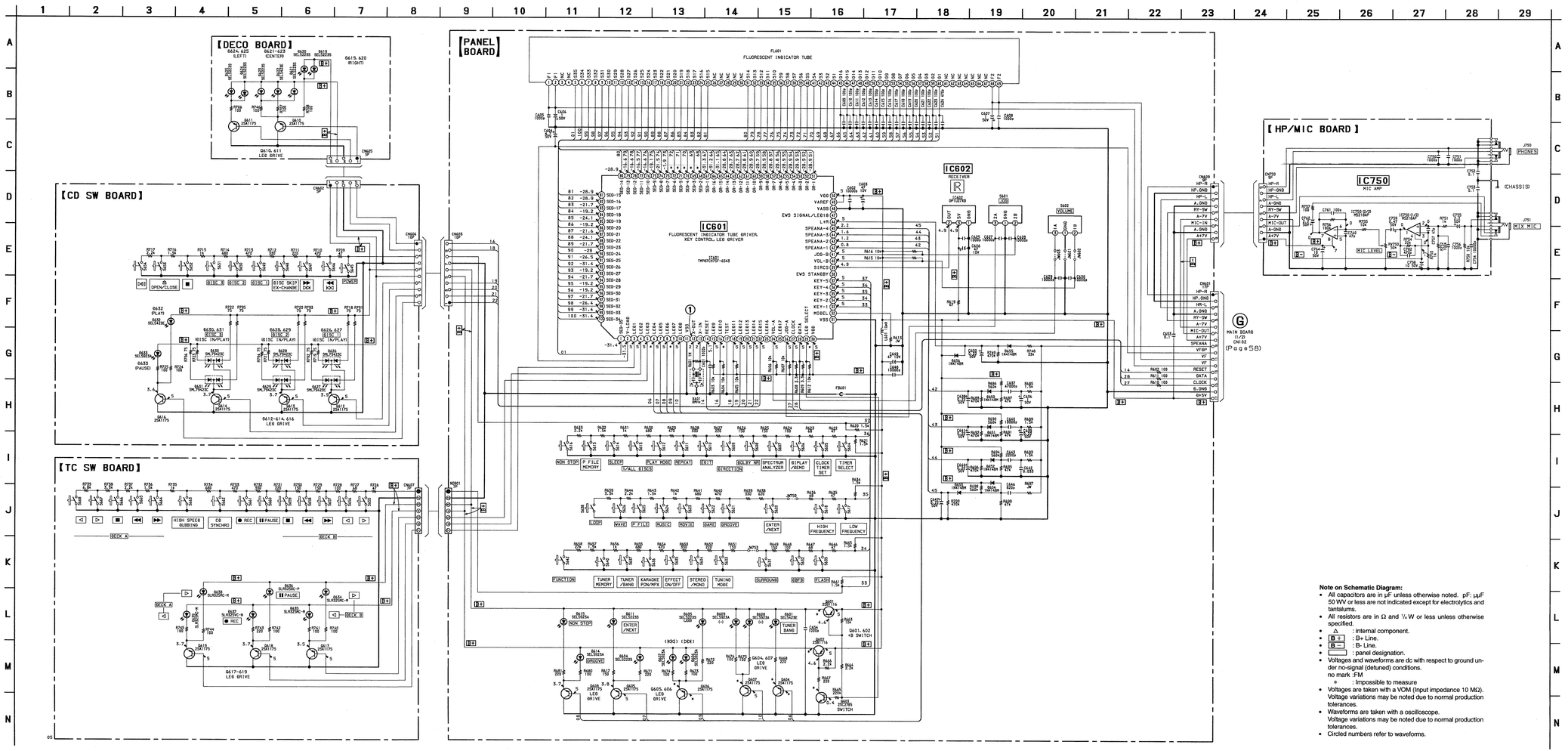
Ref. No.	Location	Ref. No.	Location
D141	I-11	IC902	H-6
D281	I-9	IC903	F-4
D291	I-9	IC904	H-4
D301	F-6	IC1501	C-3
D302	E-6	IC1502	D-3
D303	F-6	Q101	B-12
D304	F-6	Q102	B-11
D305	F-6	Q103	B-12
D306	E-7	Q141	I-11
D307	F-6	Q142	I-10
D902	I-7	Q151	B-12
D903	I-7	Q202	F-11
D904	J-7	Q203	G-11
D905	J-7	Q204	H-9
D906	J-6	Q231	H-9
D907	J-5	Q232	G-9
D908	J-4	Q252	G-9
D909	J-4	Q253	F-9
D910	J-4	Q254	H-8
D911	J-4	Q281	J-10
D912	G-5	Q282	I-9
D913	G-4	Q283	I-9
D914	F-4	Q301	F-7
D915	I-4	Q901	G-4
D951	J-7	Q902	G-5
D952	J-7	Q903	I-4
		Q904	J-4
IC102	C-12	Q905	G-4
IC201	E-10	Q906	G-5
IC231	G-8	Q907	H-5
IC281	I-10	Q1531	D-2
IC301	D-6	Q1532	D-2
IC302	F-6	Q1533	D-2
IC391	B-13	Q1534	D-3
IC901	H-4	Q1535	D-2

Note on Printed Wiring Board:
- ⟐——— : parts extracted from the component side.
- ⚠ : internal component.
- Abbreviation
  AED : Northerm European model
  G : German model
  EE : East European model

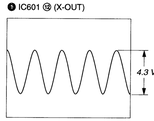
【MAIN BOARD】

【TRANS BOARD】

6-11. SCHEMATIC DIAGRAM – PANEL Section – • See page 76 for IC Block Diagrams.

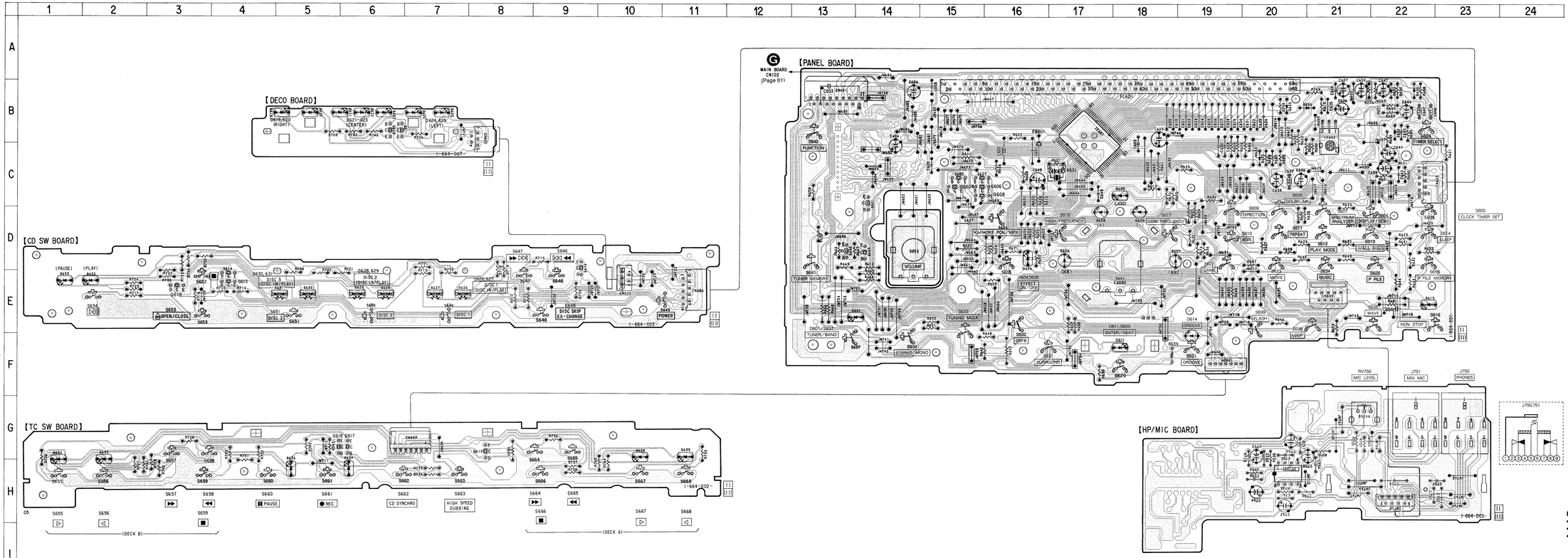


• Waveform
● IC601 ⑬ (X-OUT)



Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line.
- B− : B- Line.
- ▭ : panel designation.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark :FM
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.



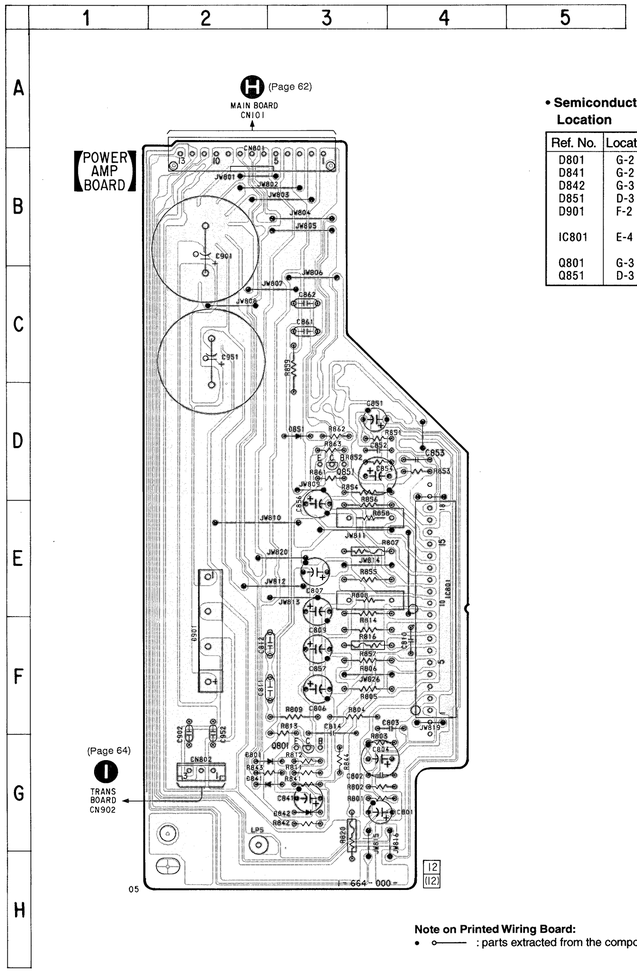
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D601	E-14	D639	G-11
D604	D-16	D650	C-20
D605	C-18	D651	C-22
D606	D-17	D652	B-22
D607	D-18	D653	B-22
D608	D-17	D654	B-22
D609	D-18	D655	B-20
D611	F-18	D656	B-21
D614	F-19		
D615	E-22	IC601	B-17
D619	B-5	IC602	B-21
D620	B-5	IC750	H-20
D621	B-6		
D622	B-6	Q601	C-14
D623	B-6	Q602	D-13
D624	B-7	Q603	D-14
D625	B-7	Q604	C-15
D626	E-7	Q605	C-15
D627	E-7	Q606	C-15
D628	E-6	Q607	C-15
D629	E-6	Q608	C-15
D630	E-5	Q610	B-6
D631	E-5	Q611	B-6
D632	E-2	Q612	D-9
D633	E-1	Q613	E-4
D634	G-1	Q614	E-4
D635	G-2	Q616	E-3
D636	H-5	Q617	G-6
D637	H-6	Q618	G-6
D638	G-10	Q619	G-8

Note on Printed Wiring Board:
- ⋄——— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- △ : internal component.

6-13. PRINTED WIRING BOARD – POWER AMP Section –

• See page 37 for Circuit Boards Location.



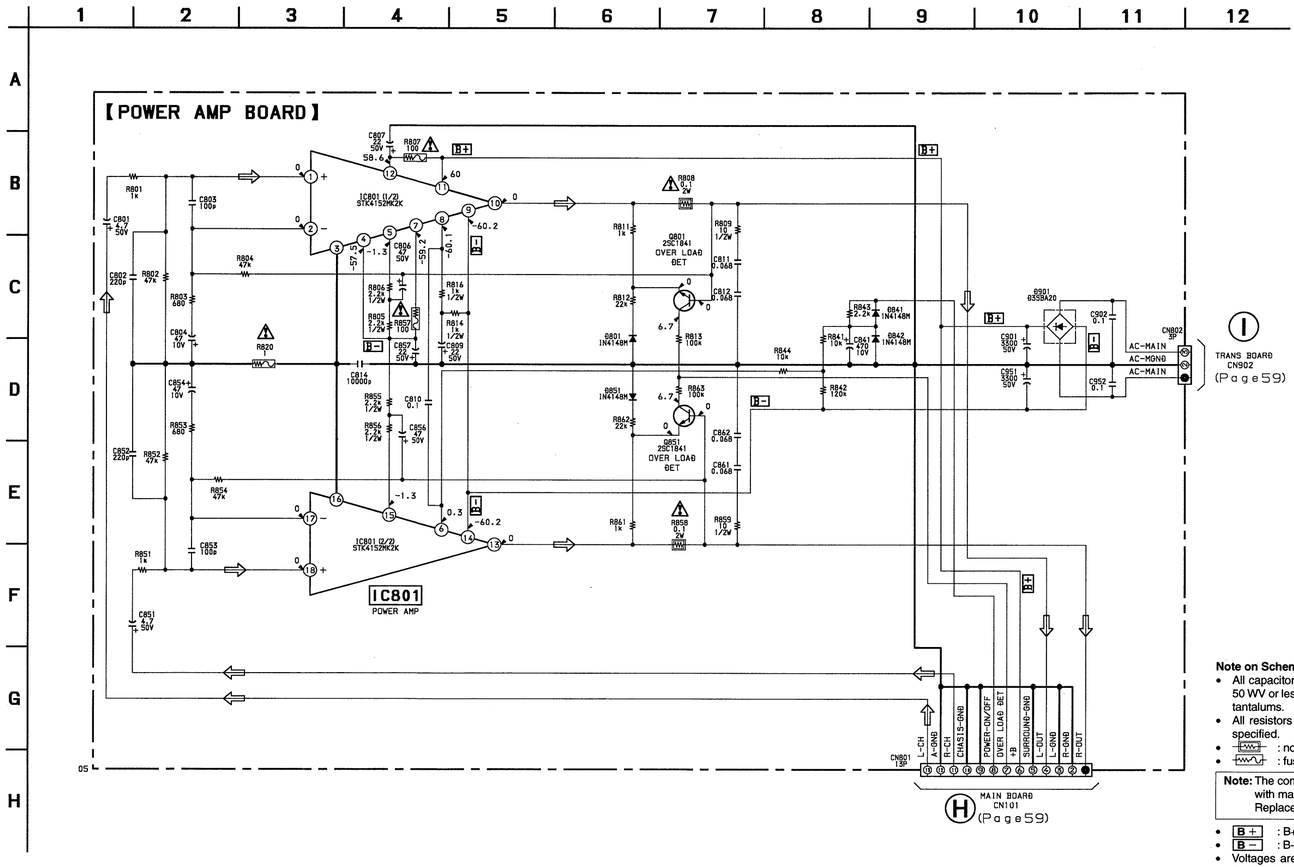
• **Semiconductor Location**

Ref. No.	Location
D801	G-2
D841	G-2
D842	G-3
D851	D-3
D901	F-2
IC801	E-4
Q801	G-3
Q851	D-3

Note on Printed Wiring Board:

• ○—— : parts extracted from the component side.

6-14. SCHEMATIC DIAGRAM – POWER AMP Section –



Note on Schematic Diagram:

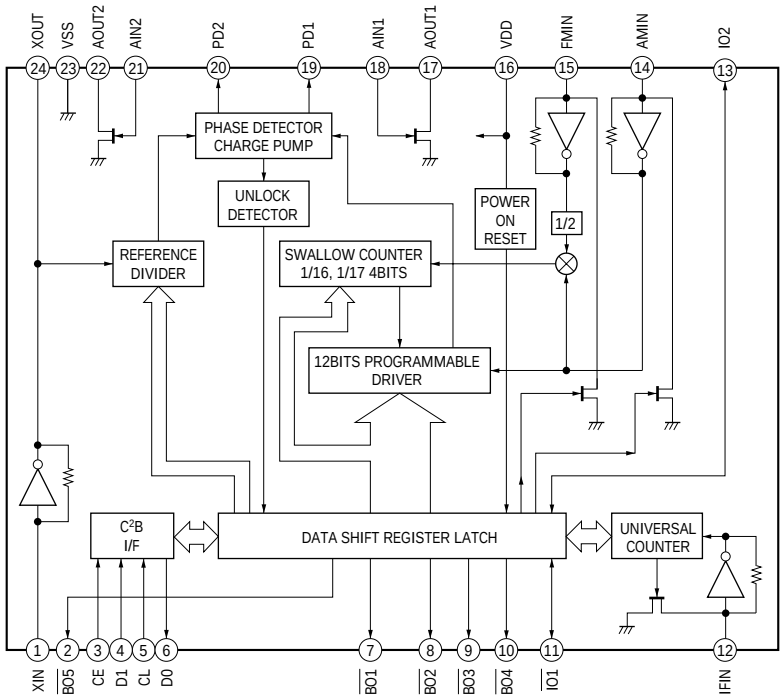
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

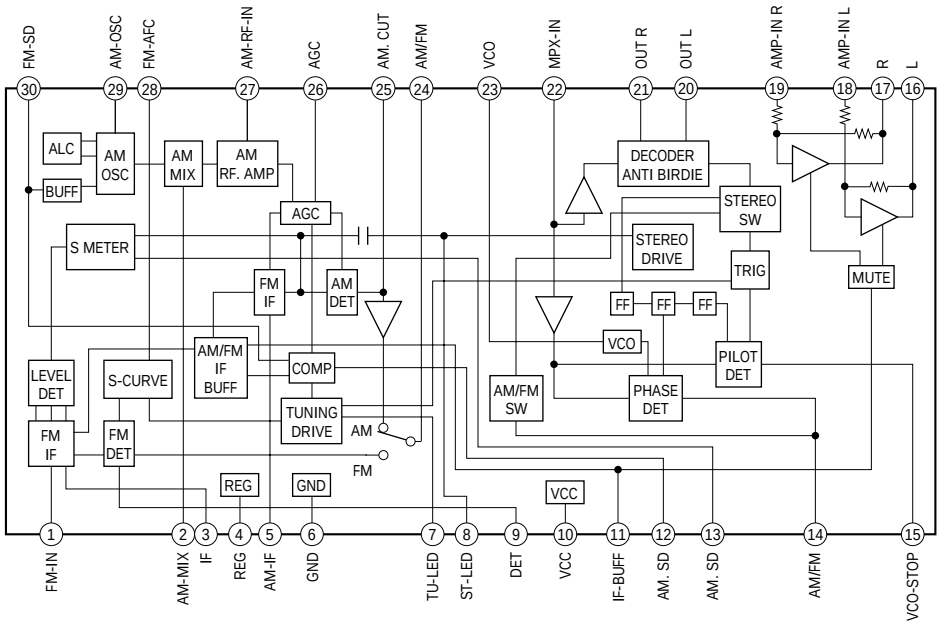
- B+ : B+ Line.
- B− : B- Line.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark :FM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

- **IC Block Diagrams**

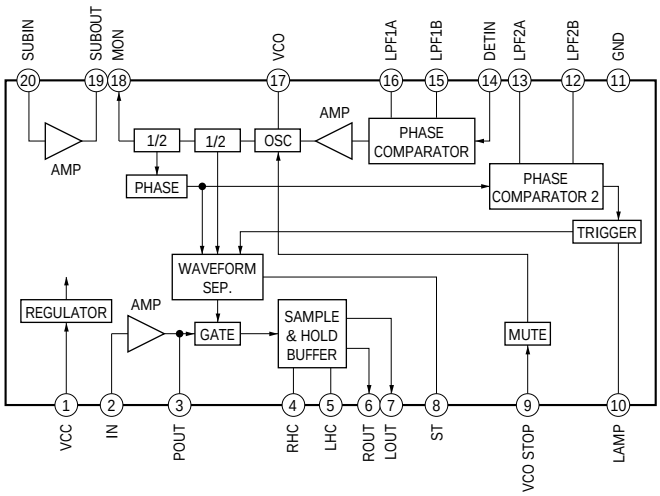
IC21 LC72130 (TCB BOARD)



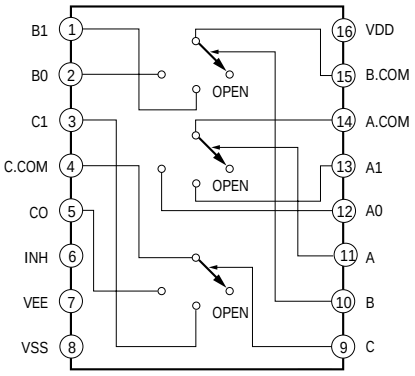
IC41 LA1835 (TCB BOARD)



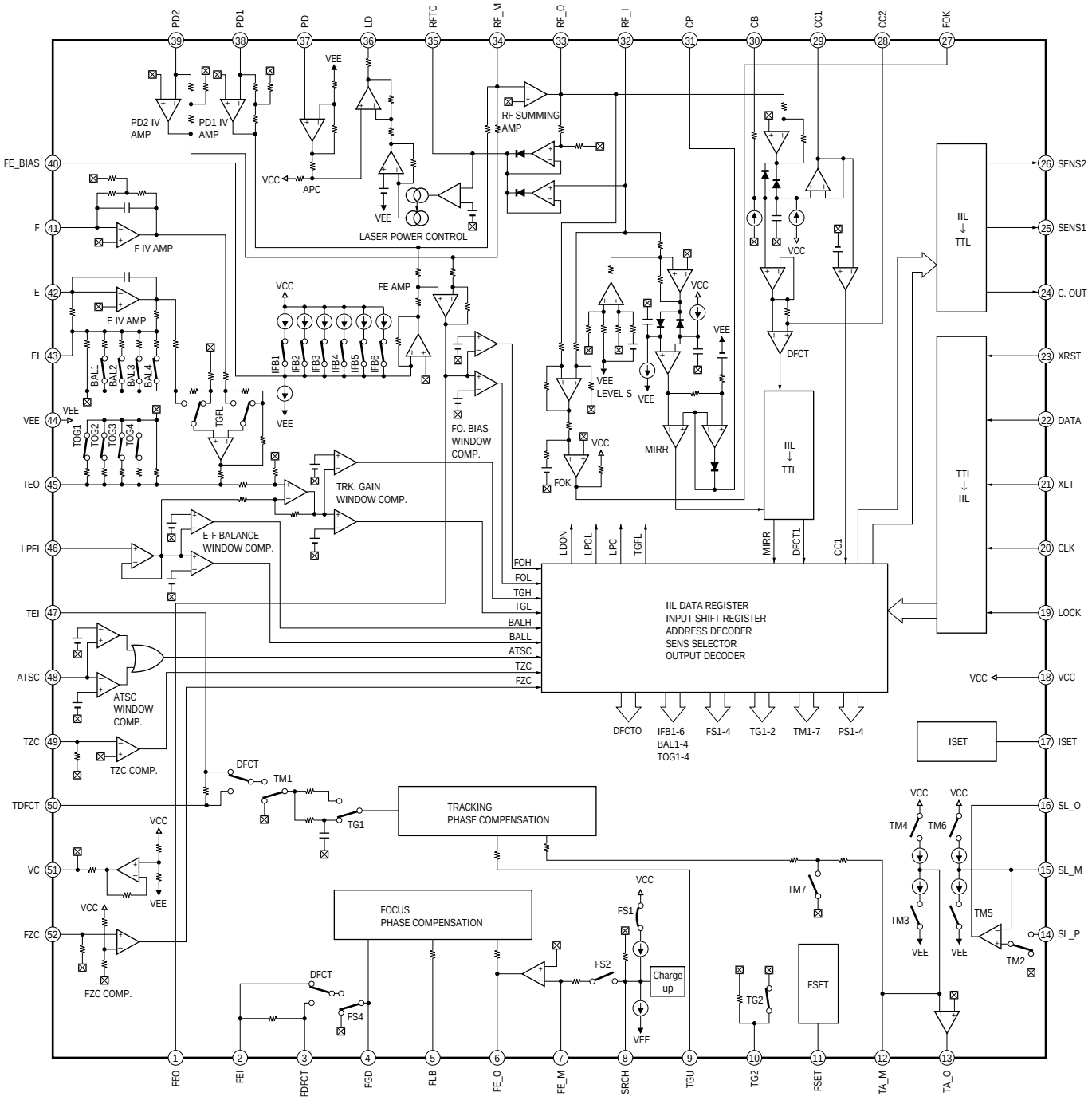
IC1701 IR3R42 (TCB BOARD)



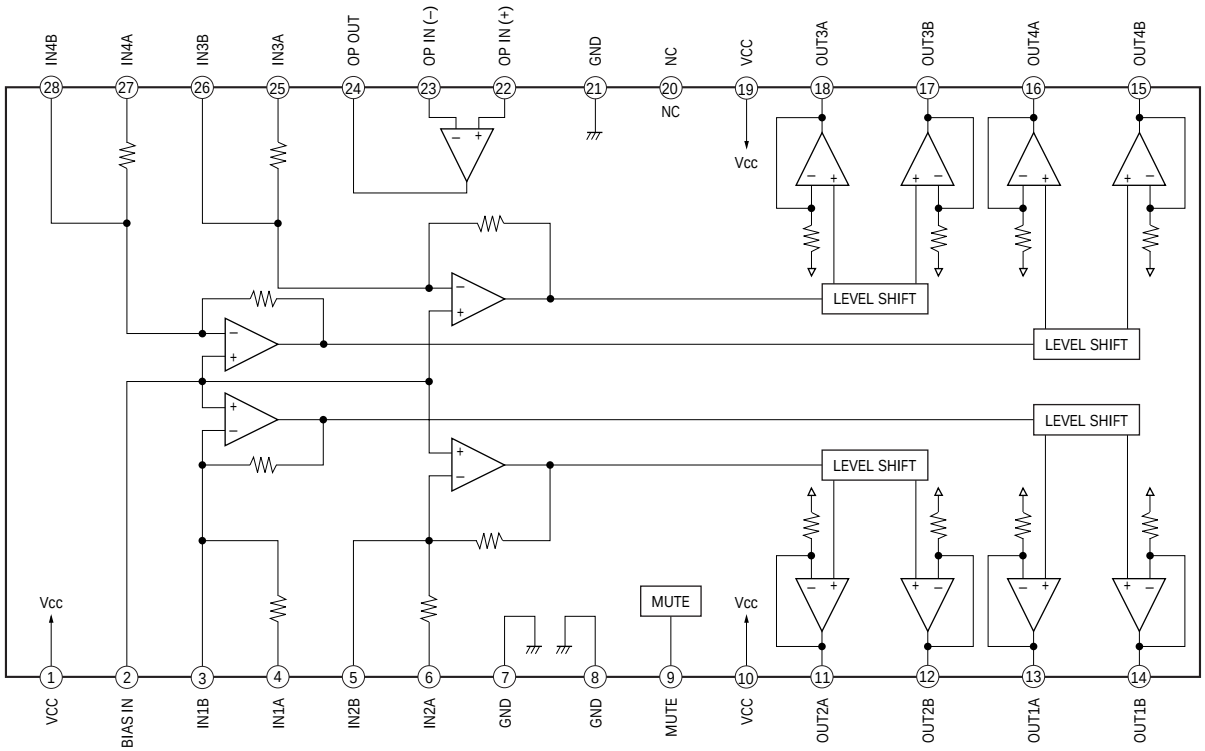
IC1702 MC14053BCP (TCB BOARD)



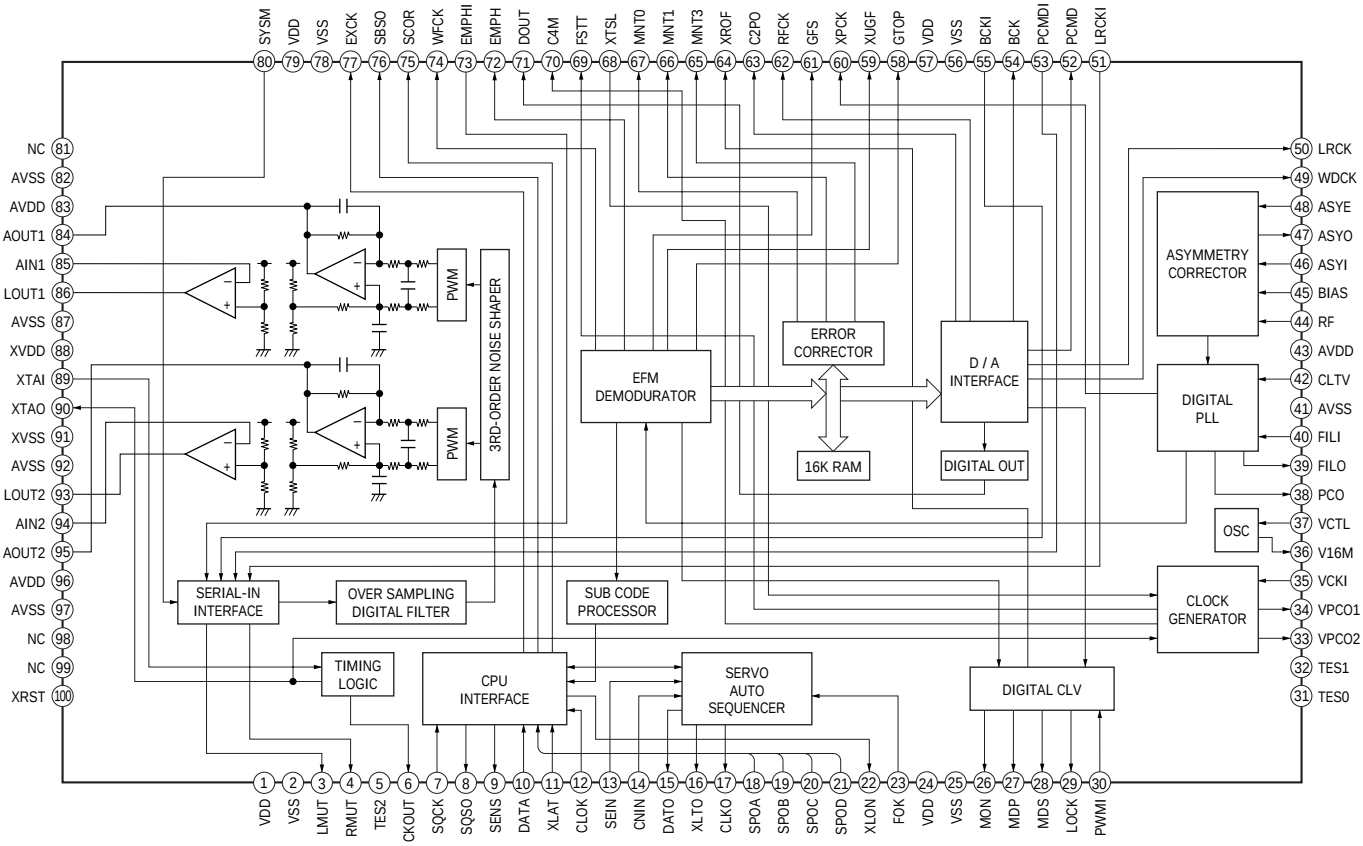
IC101 CXA1992AR (BD BOARD)



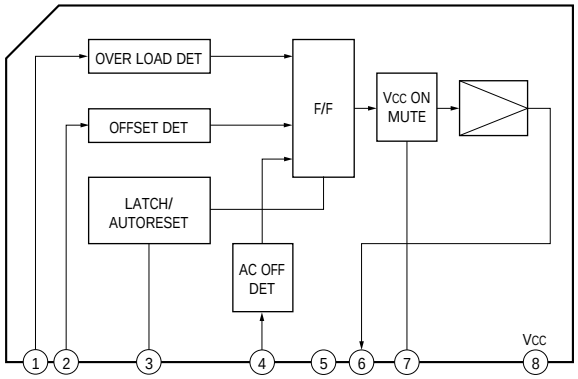
IC102 BA5941FP-E2 (BD BOARD)



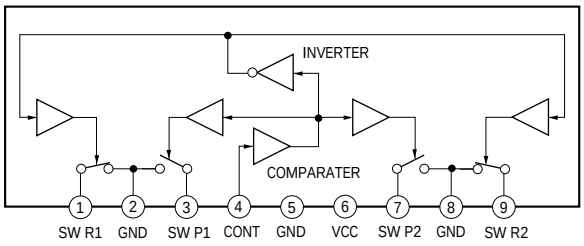
IC103 CXD2519Q (BD BOARD)



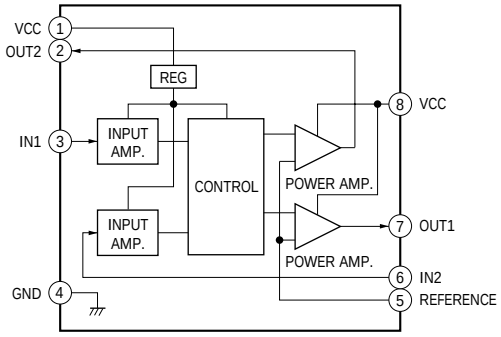
IC281 µPC1237HA (MAIN BOARD)



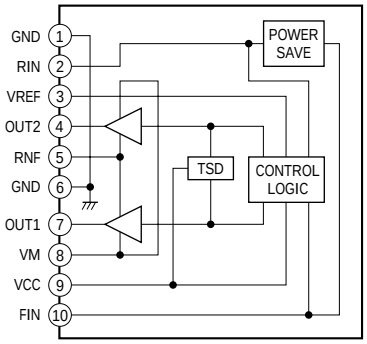
IC602 µPC1330HA (AUDIO BOARD)



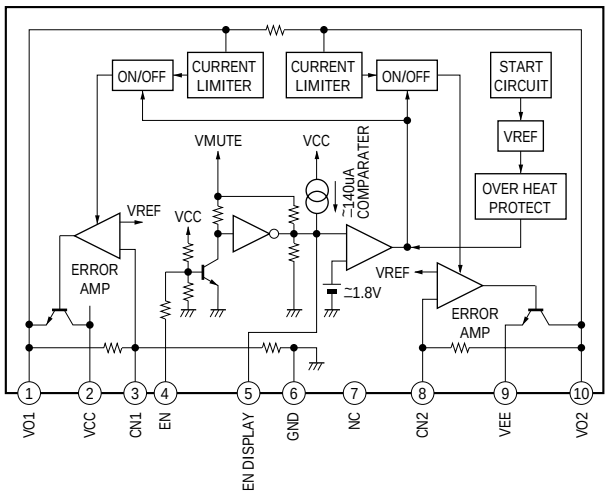
IC701 M54641L
(MOTOR (TURN) BOARD)



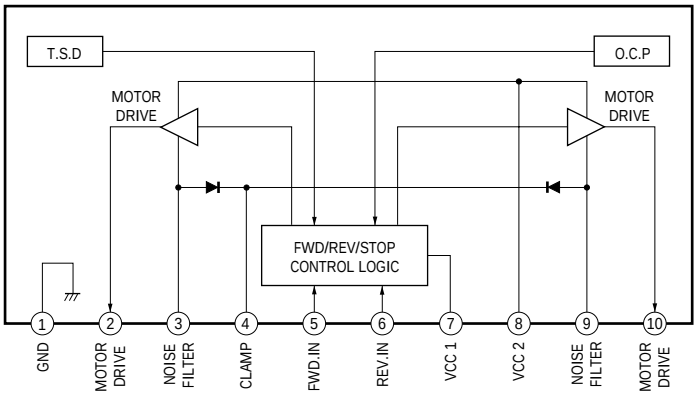
IC801 BA6286N
(MOTOR (SLIDE) BOARD)



IC901 LA5617 (MAIN BOARD)



IC1502 LB1641 (MAIN BOARD)



6-15. IC PIN FUNCTION DESCRIPTION
MAIN BOARD IC301 µPD780018YGF-015-3BA (MASTER CONTROL)

Pin No.	Pin Name	I/O	Function
1	TA-MUTE	O	Line mute signal output
2	DBFB-H/L	O	DBFB H/L select signal output
3	427-LAT	O	Latch signal output for IC201 (M62427FP)
4	K-CON-LAT	O	Not used
5	K-CON-ON	O	
6	F-RELAY	O	Front speaker relay control output
7	R-RELAY	O	Not used
8	PL-RELAY	O	
9	TEST	I	Connected ground
10	X2	O	X'tal (5MHz)
11	X1	I	
12	VDD	–	Power supply (+5V)
13	XT2	O	X'tal (32.768 kHz)
14	XT1	I	
15	RESET	I	Reset signal input
16	(INT/IN)	I	Connected ground
17	(INT/IN/OUT)	I	
18	SCOR	O	Subcode data request signal output
19	SOFT-TEST	O	Software test port
20	AC-CUT	I	Back up signal input (Not used)
21	RDS-INT	I	Connected ground
22	RDS-DATA	I	Not used
23	VDD	–	Power supply (+5V)
24	AVDD	I	Analog reference voltage input
25	ADJ	I	CD adjust point port
26	A-SHUT	I	A Deck reel pulse detector
27	B-SHUT	I	B Deck reel pulse detector
28	B-HALF	I	Half detector signal input
29	CLK-CHECK	I	Connected ground
30	SPEC-IN	I	Version select signal input
31	ADJ 2	I	Connected ground
32	DEMO-MODE	I	DEMO H/L select signal input
33	AVSS	–	Ground
34	SQ-DATA-IN	I	Subcode Q data clock input
35	—	–	Not used
36	SQ-CLK	I	Sub code Q data clock input
37	SW-ON/OFF	O	Not used
38, 39	FUNC 1, 2	I	Connected ground
40	VSS	–	Ground
41	VOL-LAT	O	Not used
42	PL-LAT	O	
43	COM-DIN	I	Connected ground
44	COM-DOUT	O	Common serial data output

Pin No.	Pin Name	I/O	Function
45	COM-CLK	O	Common serial clock output
46	CD-POWER	O	CD power on signal output
47	CD-DATA	O	CD data output
48	CD-CLK	O	CD clock output
49	MSM-CND	O	Not used
50	MSM-BUSY	I	Connected ground
51	MSM-LAT	O	Not used
52	MSM-NAR	I	
53	MSM-CH	O	
54	INPUT-CHANGE	O	GAIN control output
55	1IC-DATA	O	Data output for IC601
56	1IC-CLK	O	Clock output for IC601
57	XRST	O	CD reset signal output
58	XLT	O	CD latch signal output
59	FOUCUS-SW	O	Focus switching signal output
60	TBL-L	O	Table motor control output
61	TBL-R	O	
62	TRAY-LED	O	CD tray LED ON/OFF output
63	LOAD-OUT	O	Loading motor control signal output
64	LOAD-IN	O	
65	ST-CLK	O	Tuner clock output
66	ST-DIN	I	Tuner data input
67	ST-DOUT	O	Tuner data output
68	ST-CE	O	Tuner chip enable output
69	TUNED	I	Tuned detection for tuner
70	STEREO	I	Stereo detection for tuner
71	VSS	–	Ground
72	ST-MUTE	O	Tuner mute signal output
73	SENS2	I	BD Condition signal input
74	SENS	I	
75	DISC-SENS	I	Not used
76	T-SENS	I	CD table detection signal input
77	UPSW	I	Up SW (S201) signal input (Not used)
78	ENC 3	I	Disctray address detect encoder input
79	ENC 2	I	
80	ENC 1	I	
81	OUT-OPEN	I	Out switch signal input
82	CAP-H/N	O	Capstan motor H/N speed select signal output
83	B-TRG	O	Trigger motor control output
84	A-TRG	O	Trigger motor control output
85	TRG-LOW	O	Trigger motor control output
86	CAP-M-ON/OFF	O	Capstan motor ON/OFF signal output
87	PB-A/B	O	PB Deck A/Deck B select output

Pin No.	Pin Name	I/O	Function
88	EQ-H/N	O	Equalizer H/N select output
89	BIAS	O	Bias ON/OFF signal output
90	REC-MUTE	O	REC mute ON/OFF selection output
91	NR-ON/OFF	O	NR ON/OFF signal output
92	R/P-PASS	O	REC/PB/PASS selection output
93	TC-MUTE	O	TC mute ON/OFF selection output
94	A-PLAY-SW	I	Deck A play detect
95	B-PLAY-SW	I	Deck B play detect
96	RELAY	O	REC/PB head selection output for IC602
97	A-HALF	I	Deck A cassette detect
98	POWER	O	POWER ON/OFF signal output
99	SW-F-CON	O	Super woofer mode signal output (Not used)
100	STK-MUTE	O	Power amp ON/OFF signal output

PANEL BOARD IC601 TMP87CH75F-6543 (GRAPHIC CONTROL)

Pin No.	Pin Name	I/O	Function
1	SEG-35	O	Fluorescent display tube segment signal output
2	V-LOAD	–	–30V for Fluorescent display tube
3-10	LED1-LED8	O	LED driver output
11	VSS	–	Ground
12	X-OUT	O	X'tal (8MHz)
13	X-IN	I	X'tal (8MHz)
14	RESET	I	Reset signal input from master control
15, 16	LED9, LED10	O	LED driver output
17	TEST	I	Connected ground
18-23	LED11-LED16	O	LED driver output
24	VOL-A	I	Rotaly encoder pulse input
25	LED 17	O	Not used
26	JOG-A	I	Rotaly encoder pulse input
27	CLOCK	I	Serial clock input from master control
28	DATA	I	Serial data input from master control
29	LED SELECT	O	LED select signal output
30	VDD	–	Power supply (+5V)
31	VSS	–	Ground
32	MODEL	I	Connected ground
33-37	KEY1-KEY5	I	Key input
38	EWS STANDBY	–	Not used
39	SIRCS	I	Remote commander signal input
40	VOL-B	I	Rotaly encoder pulse input
41	JOG-B	I	Rotaly encoder pulse input
42-45	SPEANA 1-4	I	Spectrum analyzer signal input
46	L + R	I	Spectrum analyzer (high frequency) input
47	EWS SIGNAL /LED 18	I	Not used
48	VASS	–	Ground
49	VAREF	I	Analog reference voltage input
50	VDD	–	Power supply (+5V)
51-66	GR1-GR16	O	Fluorescent display tube gride signal output
67-100	SEG1-SEG34	O	Fluorescent display tube segment signal output

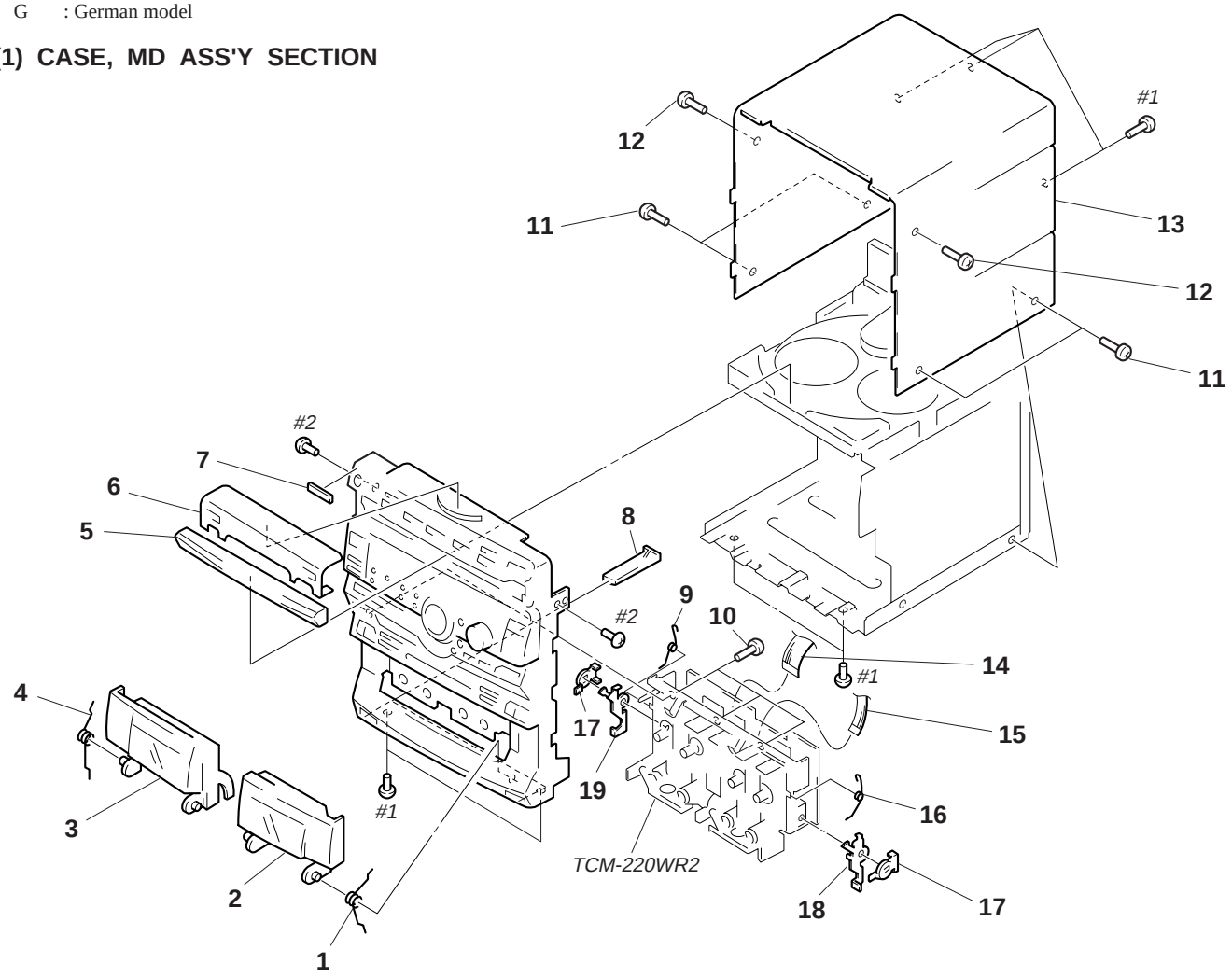
SECTION 7
EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearrance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AED : Northern European model
  EE : East European model
  G : German model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

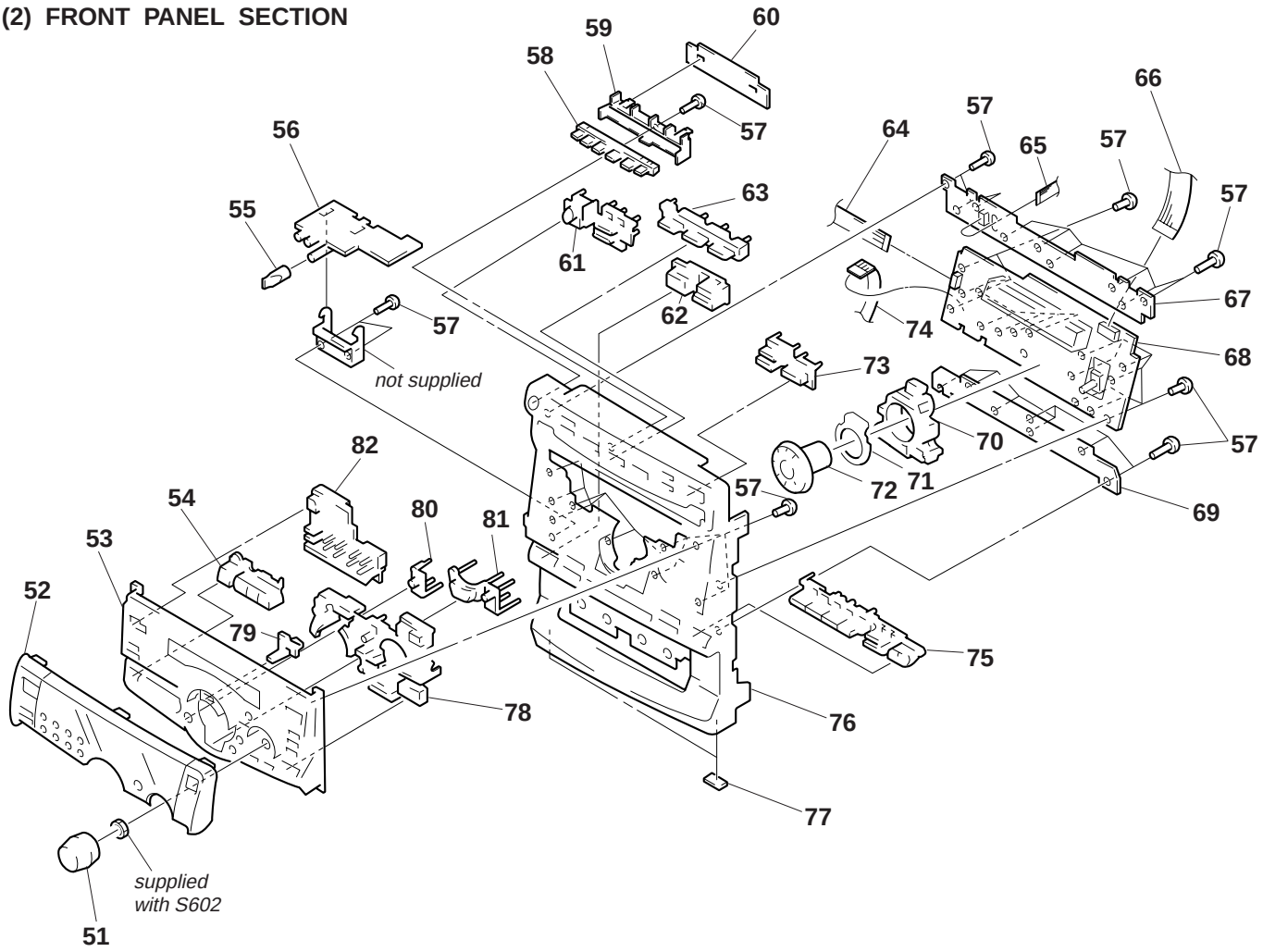
(1) CASE, MD ASS'Y SECTION



Ref. No.	Part No.	Description	Remark
1	4-987-937-01	SPRING (B DECK)	
2	X-4947-914-1	LID (B) ASSY, CASSETTE (BLACK) (EXCEPT EE, CIS)	
2	X-4948-117-1	LID (B) ASSY, CASSETTE (METALLIC) (EE, CIS)	
3	X-4947-913-1	LID (A) ASSY, CASSETTE (BLACK) (EXCEPT EE, CIS)	
3	X-4948-116-1	LID (A) ASSY, CASSETTE (METALLIC) (EE, CIS)	
4	4-987-936-01	SPRING (A DECK)	
5	4-986-858-81	PANEL, LOADING (BLACK) (EXCEPT EE, CIS)	
5	4-991-701-21	PANEL, LOADING (METALLIC) (EE, CIS)	
6	4-986-859-31	WINDOW (CD)	
7	4-962-708-11	EMBLEM (4-A), SONY	
8	4-986-843-01	BUTTON (EJECT) (BLACK) (EXCEPT EE, CIS)	

Ref. No.	Part No.	Description	Remark
8	4-986-843-21	BUTTON (EJECT) (METALLIC) (EE, CIS)	
9	4-990-129-01	SPRING (OPEN A)	
10	4-951-620-01	SCREW (2.6X8), +BVTP	
11	3-363-099-01	SCREW (CASE 3 TP2) (3X8)	
12	3-363-099-41	SCREW (CASE 3 TP2) (3X10)	
* 13	4-986-851-11	CASE (BLACK) (EXCEPT EE, CIS)	
* 13	4-988-767-11	CASE (METALLIC) (EE, CIS)	
14	1-773-160-11	WIRE (FLAT TYPE) (21 CORE)	
15	1-769-947-11	WIRE (FLAT TYPE) (11 CORE)	
16	4-990-130-01	SPRING (OPEN B)	
17	3-354-957-01	JOINT (LOCK LEVER)	
* 18	3-354-954-01	LEVER (LOCK LEVER R)	
* 19	3-354-953-01	LEVER (LOCK LEVER L)	

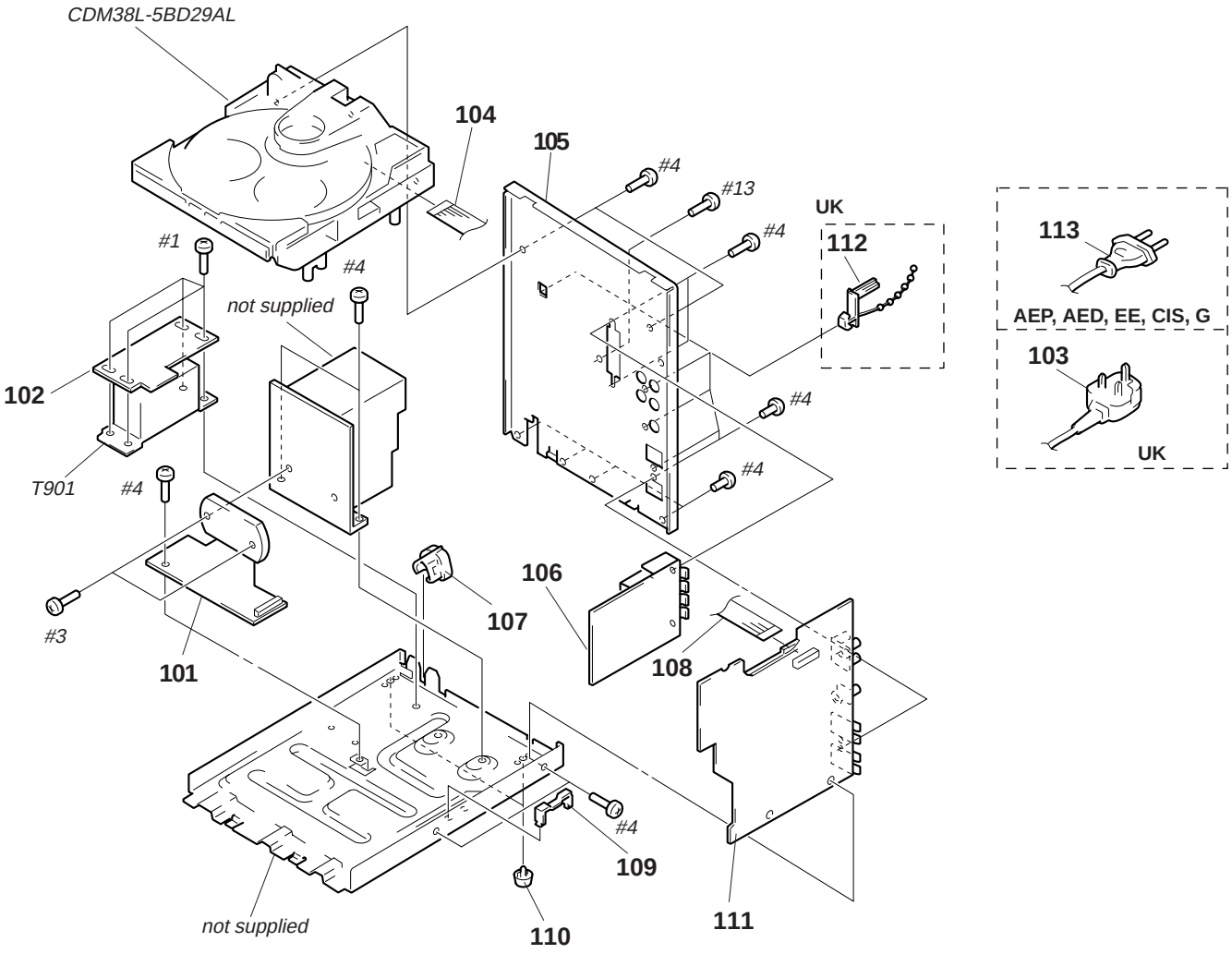
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-986-877-01	KNOB (VOL) (BLACK) (EXCEPT EE, CIS)	
51	4-986-877-21	KNOB (VOL) (METALLIC) (EE, CIS)	
52	4-986-869-01	WINDOW (STR) (BLACK) (EXCEPT EE, CIS)	
52	4-986-869-61	WINDOW (STR) (METALLIC) (EE, CIS)	
53	4-986-866-51	PANEL, SUB (BLACK) (EXCEPT EE, CIS)	
53	4-986-866-21	PANEL, SUB (METALLIC) (EE, CIS)	
54	X-4947-910-1	BUTTON (DJ) ASSY (BLACK) (EXCEPT EE, CIS)	
54	X-4948-111-1	BUTTON (DJ) ASSY (METALLIC) (EE, CIS)	
55	4-986-893-01	KNOB (MIC) (BLACK) (EXCEPT EE, CIS)	
55	4-896-893-21	KNOB (MIC) (METALLIC) (EE, CIS)	
* 56	A-4392-351-A	HP/MIC BOARD, COMPLETE	
57	4-951-620-01	SCREW (2.6X8), +BVTP	
58	4-986-863-01	INDICATOR (CD)	
* 59	4-986-865-01	HOLDER (LED)	
* 60	1-664-007-11	DECO BOARD	
61	4-986-860-01	BUTTON (POWER) (BLACK) (EXCEPT EE, CIS)	
61	4-986-860-21	BUTTON (POWER) (METALLIC) (EE, CIS)	
62	4-986-901-01	BUTTON (A DECK) (BLACK) (EXCEPT EE, CIS)	
62	4-986-901-21	BUTTON (A DECK) (METALLIC) (EE, CIS)	
63	4-986-862-01	BUTTON (CD)	
64	1-777-869-11	WIRE (FLAT TYPE) (10 CORE)	
65	1-777-936-11	WIRE (FLAT TYPE) (5 CORE)	
66	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)	
* 67	A-4392-348-A	CD SW BOARD, COMPLETE	
* 68	A-4392-340-A	PANEL BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
* 69	A-4392-350-A	TC SW BOARD, COMPLETE	
* 70	4-986-880-01	HOLDER (JOG)	
71	4-986-881-01	JOG (PLATE)	
72	X-4947-909-1	KNOB (JOG-T5) ASSY (BLACK)	(EXCEPT EE, CIS)
72	X-4948-114-1	KNOB (JOG-T5) ASSY (METALLIC) (EE, CIS)	
73	4-986-861-01	BUTTON (PLAY) (BLACK) (EXCEPT EE, CIS)	
73	4-986-861-21	BUTTON (PLAY) (METALLIC) (EE, CIS)	
74	1-769-909-11	WIRE (FLAT TYPE) (9 CORE)	
75	4-986-902-01	BUTTON (B DECK) (BLACK) (EXCEPT EE, CIS)	
75	4-986-902-21	BUTTON (B DECK) (METALLIC) (EE, CIS)	
76	4-986-856-01	PANEL, FRONT (BLACK) (EXCEPT EE, CIS)	
76	4-986-856-21	PANEL, FRONT (METALLIC) (EE, CIS)	
77	4-930-336-61	FOOT (FELT)	
78	X-4947-911-1	BUTTON (T/B) ASSY (BLACK) (EXCEPT EE, CIS)	
78	X-4948-107-1	BUTTON (T/B) ASSY (METALLIC) (EE, CIS)	
79	4-986-883-01	INDICATOR (JOG)	
80	4-986-894-01	BUTTON (GROOVE) (BLACK) (EXCEPT EE, CIS)	
80	4-986-894-11	BUTTON (GROOVE) (METALLIC) (EE, CIS)	
81	X-4947-912-1	BUTTON (E/S) ASSY (BLACK) (EXCEPT EE, CIS)	
81	X-4948-110-1	BUTTON (E/S) ASSY (METALLIC) (EE, CIS)	
82	4-986-872-01	BUTTON (TIMER) (BLACK) (EXCEPT EE, CIS)	
82	4-986-872-31	BUTTON (TIMER) (METALLIC) (EE, CIS)	

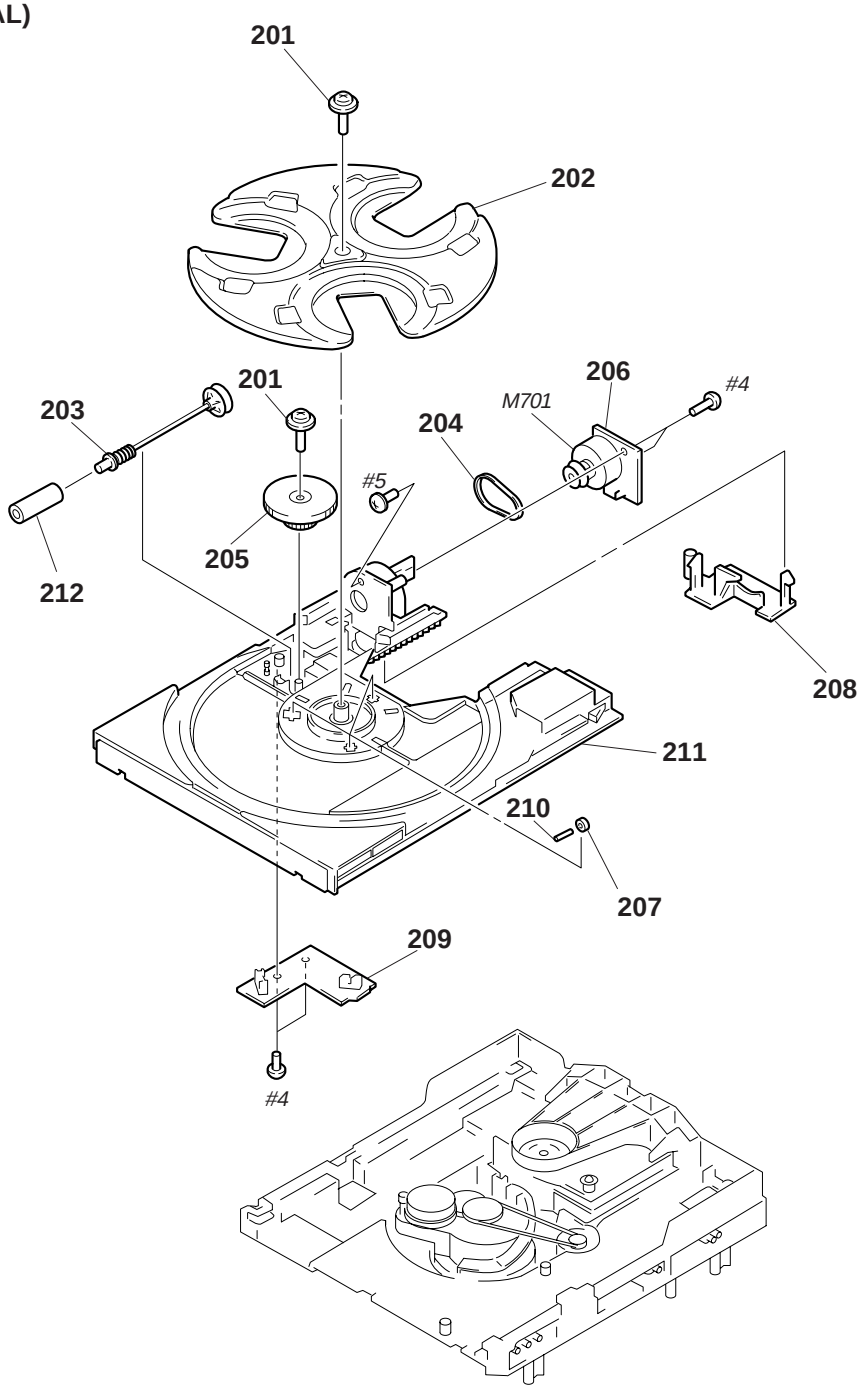
(3) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 101	A-4392-331-A	POWER AMP BOARD, COMPLETE	
* 102	1-664-004-11	TRANS BOARD	
⚠103	1-751-529-11	CORD, POWER (UK)	
104	1-777-870-11	WIRE (FLAT TYPE) (19 CORE)	
* 105	4-986-844-51	PANEL, BACK (AEP, AED, G, UK)	
* 105	4-986-844-61	PANEL, BACK (EE, CIS)	
* 106	A-4303-574-A	TCB BOARD, COMPLETE (AEP, AED, G, UK)	
* 106	A-4303-578-A	TCB BOARD, COMPLETE (EE, CIS)	
* 107	3-703-244-00	BUSHING (2104), CORD	
108	1-773-012-11	WIRE (FLAT TYPE) (15 CORE)	
* 109	4-988-533-01	HOLDER, PCB	
110	4-965-822-01	FOOT	
* 111	A-4392-693-A	MAIN BOARD, COMPLETE (AEP, AED, G, UK)	
* 111	A-4392-694-A	MAIN BOARD, COMPLETE (EE, CIS)	
112	4-956-370-12	BAND, PLUG FIXED (UK)	
⚠113	1-575-651-21	CORD, POWER (AEP, AED, EE, CIS, G)	
⚠T901	1-431-147-11	TRANSFORMER, POWER	

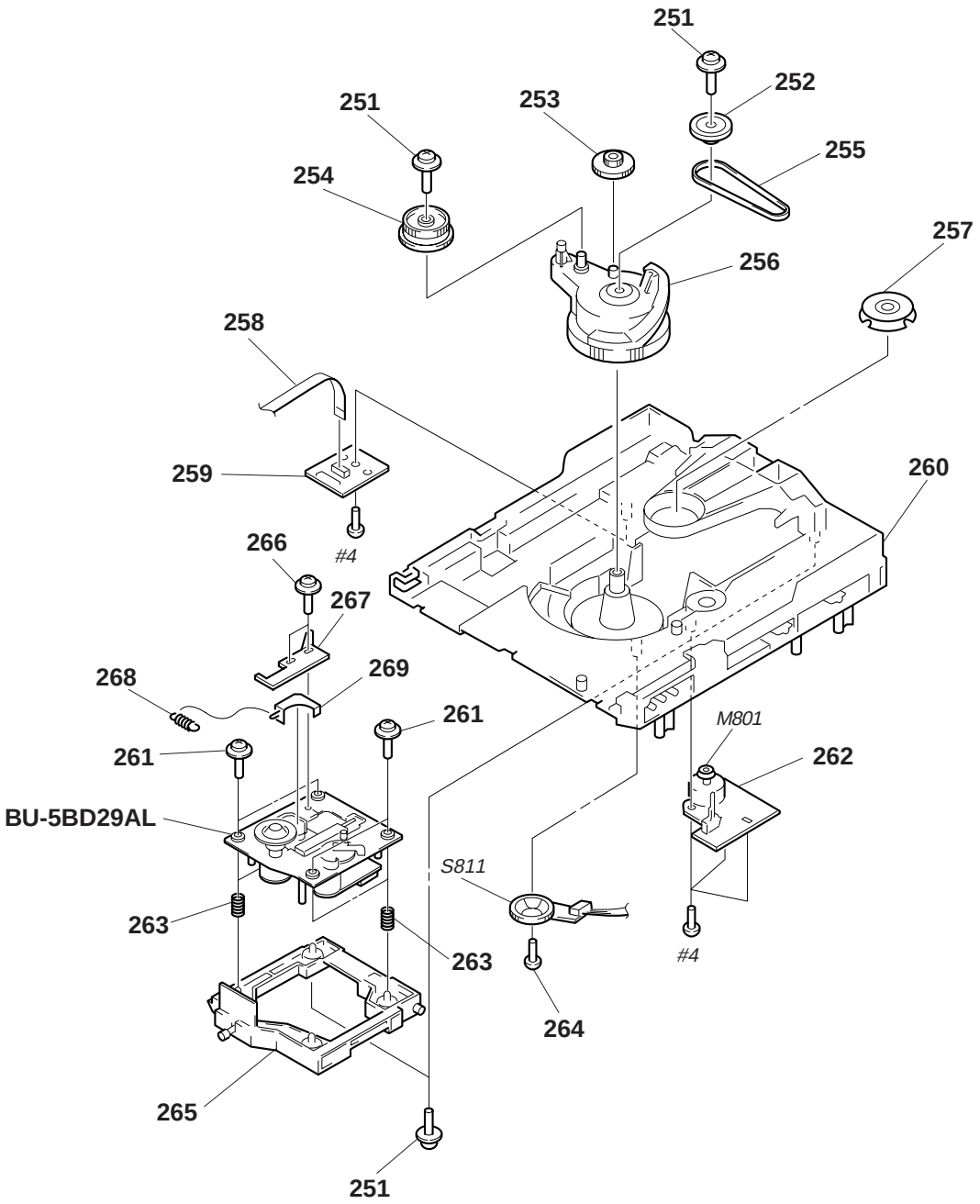
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(4) CD MECHANISM DECK SECTION-1 (CDM38L-5BD29AL)



Ref. No.	Part No.	Description	Remark
201	4-917-583-21	BRACKET, YOKE	
202	4-977-945-01	TRAY (TURN)	
203	X-4946-665-1	SHAFT ASSY, WORM	
204	4-977-943-01	BELT (TURN) (1.2)	
205	4-977-956-01	WHEEL, WORM	
* 206	1-658-577-11	MOTOR (TURN) BOARD	
207	X-4924-457-1	ROLLER ASSY	
208	4-977-941-01	BEARING (WORM)	
* 209	1-658-576-11	SENSOR BOARD	
210	4-934-376-01	SHAFT (ROLLER)	
211	4-977-944-01	TRAY (SLIDE)	
212	4-981-187-01	COLLAR (WORM)	
M701	A-4672-004-A	MOTOR ASSY (TURN)	

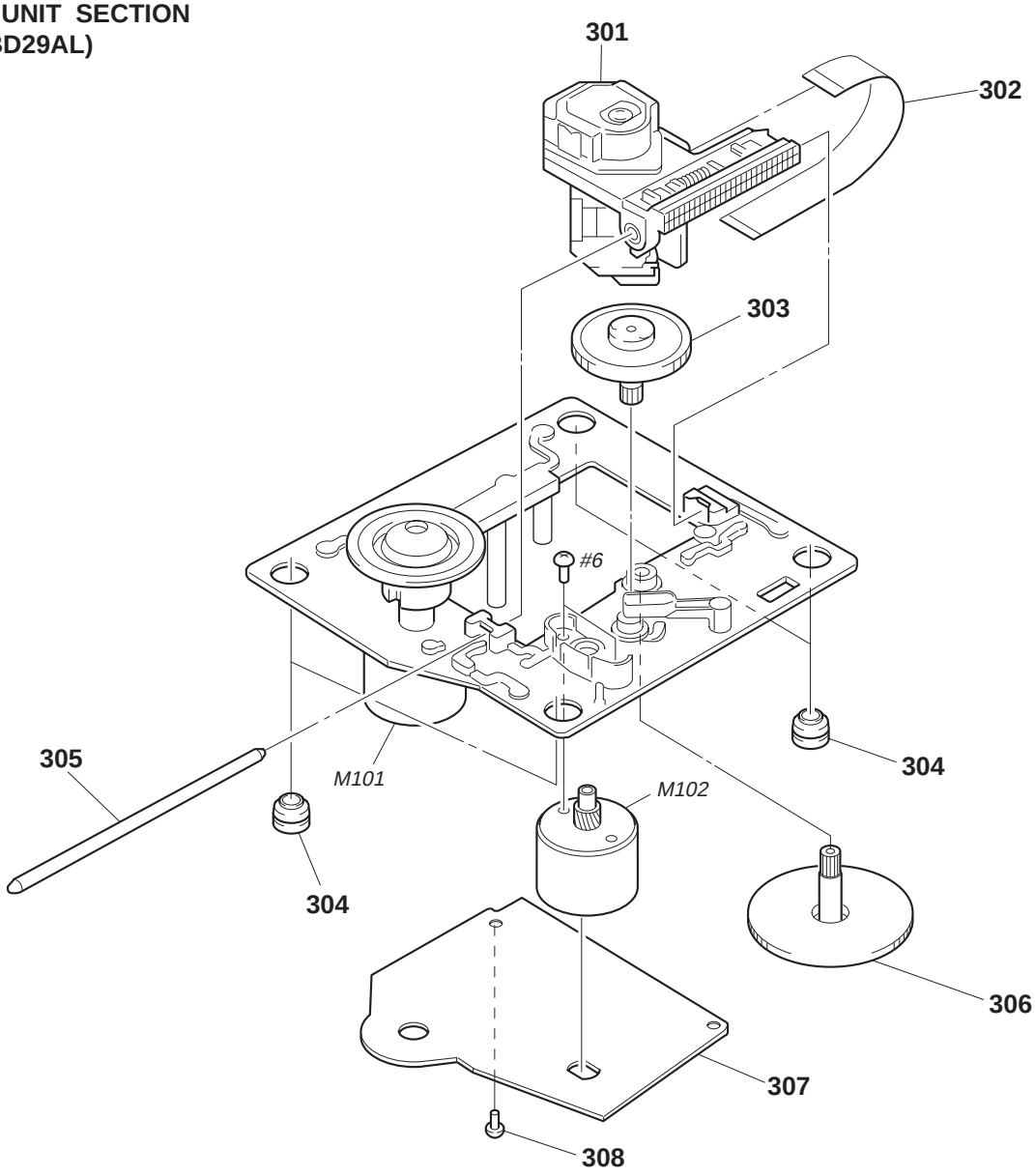
(5) CD MECHANISM DECK SECTION-2 (CDM38L-5BD29AL)



Ref. No.	Part No.	Description	Remark
251	4-917-583-71	BRACKET, YOKE	
252	4-977-954-01	PULLEY (SL)	
253	4-977-953-01	GEAR (SL-A)	
254	4-977-955-01	GEAR (SL-B)	
255	4-977-942-01	BELT (SL) (1.4)	
256	X-4946-667-1	CAM ASSY, BU	
257	1-452-538-11	MAGNET	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)	
* 259	1-658-575-11	CONNECTOR BOARD	
* 260	X-4946-668-1	CHASSIS (CDM) ASSY	
261	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	

Ref. No.	Part No.	Description	Remark
* 262	1-658-578-11	MOTOR (SLIDE) BOARD	
263	4-982-447-01	SPRING (BU), COMPRESSION	
264	4-951-620-41	SCREW (2.6), +BVTP	
* 265	X-4946-666-1	HOLDER (BU) ASSY	
266	4-989-494-01	SCREW (SLIDER), STEP	
267	4-989-492-11	SLIDER (38)	
268	4-989-819-02	SPRING, TENSION	
269	4-989-491-11	COVER, LENS	
M801	A-4672-004-A	MOTOR ASSY (SLED)	
S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)	

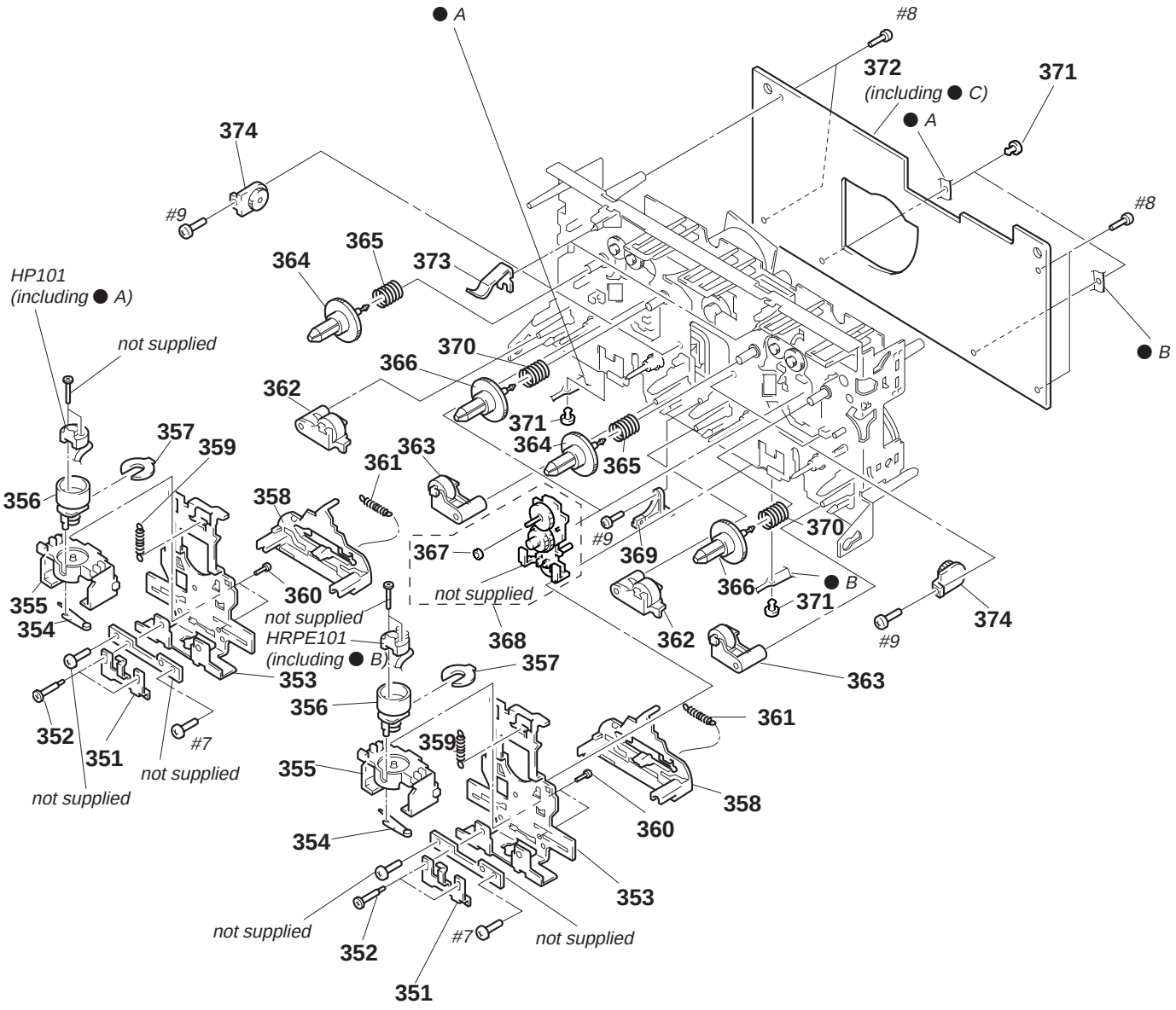
(6) BASE UNIT SECTION (BU-5BD29AL)



Ref. No.	Part No.	Description	Remark
⚠301	8-820-020-01	OPTICAL PICK-UP KSS-213D/Q-NP	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
303	4-917-567-01	GEAR (M)	
304	4-951-940-01	INSULATOR (BU)	
305	4-917-565-01	SHAFT, SLED	
306	4-917-564-01	GEAR (P), FLATNESS	
* 307	A-4699-515-A	BD BOARD, COMPLETE	
308	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-4	MOTOR ASSY, SPIMDLE	
M102	X-4917-504-1	MOTOR ASSY, SLED	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

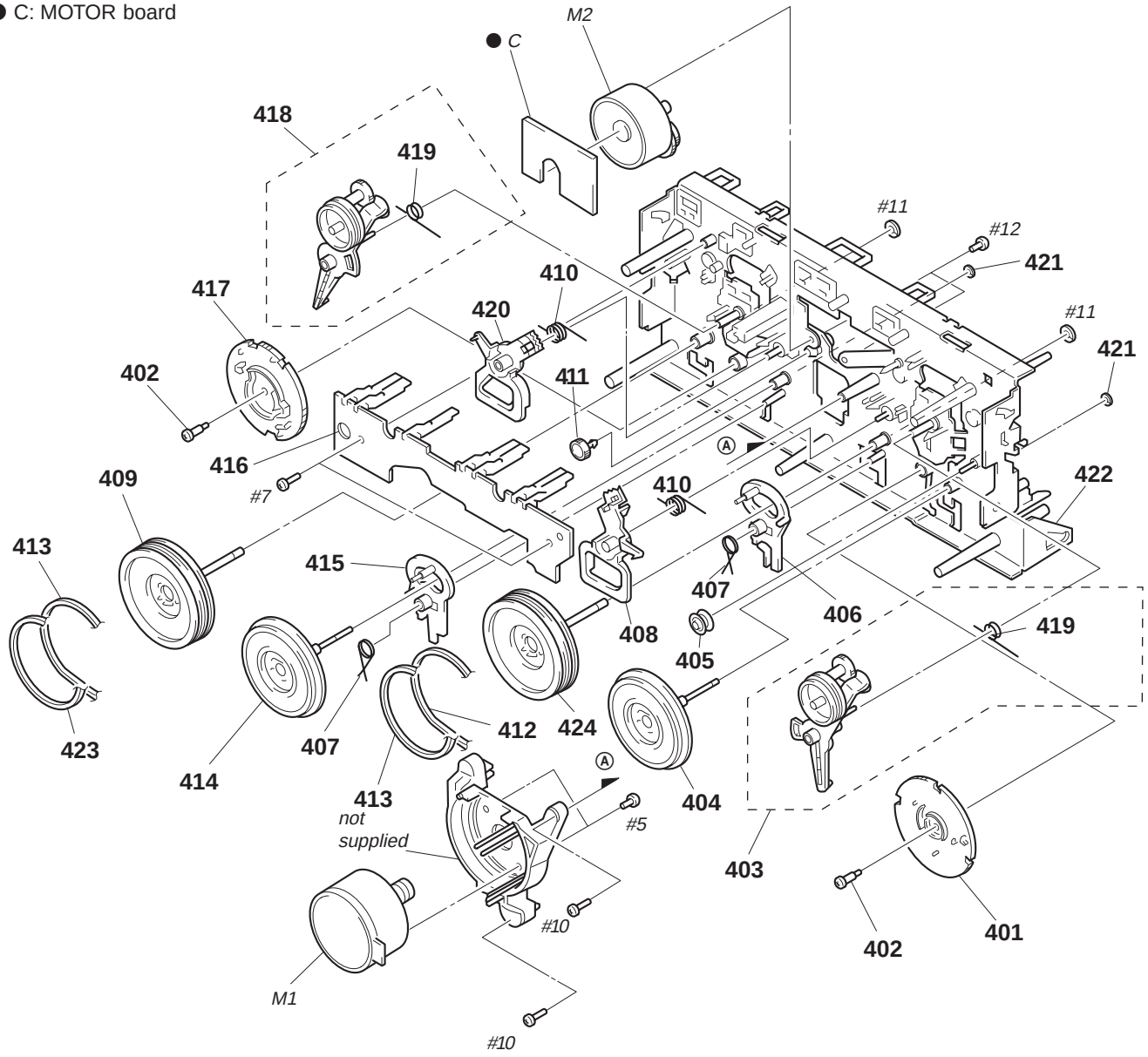
(7) TAPE MECHANISM DECK SECTION-1 (TCM-220WR2)



Ref. No.	Part No.	Description	Remark
351	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT	
352	3-919-684-01	SCREW, AZIMUTH ADJUSTMENT	
353	X-3373-113-1	SLIDER (HEAD) ASSY	
354	3-908-556-01	SPRING, HEAD TOGGLE	
355	3-908-558-02	FITTING BLOCK, HEAD	
356	3-908-557-02	ROTARY BLOCK, HEAD	
* 357	3-908-559-01	STOPPER, AZIMUTH	
358	3-908-555-01	SLIDER (REV SLIDER)	
359	3-917-143-11	SPRING, TENSION	
360	3-388-848-01	SCREW (P2X6) (B TIGHT)	
361	3-939-371-01	SPRING (1), TENSION	
362	X-3369-909-1	PINCH LEVER (REV) ASSY	
363	X-3369-908-1	PINCH LEVER (FWD) ASSY	
364	3-908-613-01	GEAR (S), REEL	
365	3-917-141-01	SPRING, COMPRESSION	
366	X-3371-305-1	REEL (T) ASSY	
367	3-669-465-01	WASHER (1.5), STOPPER	
368	X-3370-173-1	TU ASSY	
* 369	4-980-439-01	FULCRUM, HOLDER	
370	3-917-142-01	SPRING, COMPRESSION	
371	3-939-862-01	CLIP	
* 372	A-2007-131-A	AUDIO BOARD, COMPLETE	
373	3-930-972-01	DETENT, HALF	
374	3-354-963-01	DAMPER	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK A)	
HRPE1011	500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK B)	

(8) TAPE MECHANISM DECK SECTION-2 (TCM-220WR2)

● C: MOTOR board



Ref. No.	Part No.	Description	Remark
401	3-908-597-01	CAM (A)	
402	3-908-608-11	SCREW, STEP	
403	X-3372-930-1	ARM (A) ASSY, FR	
404	X-3370-169-1	FLYWHEEL (AR) ASSY	
405	3-928-047-01	PULLEY, TENSION	
406	3-908-599-01	LEVER (REV-A)	
407	3-908-601-01	SPRING (REV LEVER), TORSION	
408	3-908-603-01	LEVER (TRIGGER A)	
409	X-3367-593-1	FLYWHEEL (BF) ASSY	
410	3-908-605-01	SPRING (TRIGGER), TORSION	
411	3-908-609-01	GEAR, TRIGGER	
412	3-913-845-11	BELT (A)	
413	3-913-846-11	BELT (FR)	
414	X-3370-171-1	FLYWHEEL (BR) ASSY	
415	3-908-600-01	LEVER (REV-B)	
* 416	1-650-669-11	LEAF SWITCH BOARD	
417	3-908-598-01	CAM (B)	
418	X-3372-931-1	ARM (B) ASSY, FR	
419	3-914-111-01	SPRING (FR), TORSION	
420	3-908-604-01	LEVER (TRIGGER B)	
421	3-911-115-01	WASHER, STOPPER	
422	X-3371-441-1	CHASSIS ASSY, MECHANICAL	
423	3-917-176-11	BELT (B)	
424	X-3370-172-1	FLYWHEEL (AF) ASSY	
M1	X-3371-223-1	MOTOR ASSY, CAPSTAN	
M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)	

AUDIO

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  AED : Northern European
  G : German
  EE : East European
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
*	A-2007-131-A	AUDIO BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C301	1-162-289-31	CERAMIC	390PF	10%	50V	
C302	1-126-968-11	ELECT	100uF	20%	6.3V	
C303	1-162-282-31	CERAMIC	100PF	10%	50V	
C304	1-130-483-00	MYLAR	0.01uF	5%	50V	
C305	1-107-715-11	ELECT	22uF	20%	16V	
C311	1-162-289-31	CERAMIC	390PF	10%	50V	
C313	1-162-282-31	CERAMIC	100PF	10%	50V	
C314	1-130-487-00	MYLAR	0.022uF	5%	50V	
C315	1-126-233-11	ELECT	22uF	20%	50V	
C331	1-137-427-11	FILM	120PF	5%	50V	
C332	1-162-288-31	CERAMIC	330PF	10%	50V	
C333	1-162-209-31	CERAMIC	27PF	5%	50V	
C401	1-162-289-31	CERAMIC	390PF	10%	50V	
C402	1-126-968-11	ELECT	100uF	20%	6.3V	
C403	1-162-282-31	CERAMIC	100PF	10%	50V	
C404	1-130-483-00	MYLAR	0.01uF	5%	50V	
C405	1-107-715-11	ELECT	22uF	20%	16V	
C411	1-162-289-31	CERAMIC	390PF	10%	50V	
C413	1-162-282-31	CERAMIC	100PF	10%	50V	
C414	1-130-487-00	MYLAR	0.022uF	5%	50V	
C415	1-126-233-11	ELECT	22uF	20%	50V	
C431	1-137-427-11	FILM	120PF	5%	50V	
C432	1-162-288-31	CERAMIC	330PF	10%	50V	
C433	1-162-209-31	CERAMIC	27PF	5%	50V	
C601	1-104-396-11	ELECT	10uF	20%	16V	
C602	1-104-396-11	ELECT	10uF	20%	16V	
C611	1-124-907-11	ELECT	10uF	20%	50V	
C612	1-124-907-11	ELECT	10uF	20%	50V	
C621	1-137-150-11	FILM	0.01uF	5%	100V	
C622	1-126-961-11	ELECT	2.2uF	20%	50V	
C623	1-136-155-00	FILM	0.015uF	5%	50V	
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C627	1-124-903-11	ELECT	1uF	20%	50V	
C628	1-136-153-00	FILM	0.01uF	5%	50V	
C642	1-104-664-11	ELECT	47uF	20%	16V	
		< CONNECTOR >				
* CN601	1-568-864-11	SOCKET, CONNECTOR 21P				
CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
* CN651	1-564-521-11	PLUG, CONNECTOR 6P				
		< IC >				
IC601	8-759-111-44	IC uPC4570C-1				
IC602	8-759-143-54	IC uPC1330HA				
IC611	8-759-111-44	IC uPC4570C-1				
		< COIL >				
L331	1-410-780-11	INDUCTOR	27mH			
L431	1-410-780-11	INDUCTOR	27mH			
		< TRANSISTOR >				
Q621	8-729-142-46	TRANSISTOR	2SC2001-LK			
Q622	8-729-142-46	TRANSISTOR	2SC2001-LK			
Q623	8-729-801-93	TRANSISTOR	2SD1387			
Q651	8-729-900-65	TRANSISTOR	DTA144ES			
		< RESISTOR >				
R301	1-247-881-00	CARBON	120K	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	
R303	1-249-433-11	CARBON	22K	5%	1/4W	
R304	1-247-889-00	CARBON	270K	5%	1/4W	
R305	1-247-858-11	CARBON	13K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R311	1-247-881-00	CARBON	120K	5%	1/4W	
R312	1-247-807-31	CARBON	100	5%	1/4W	
R314	1-247-882-11	CARBON	130K	5%	1/4W	
R315	1-247-850-11	CARBON	6.2K	5%	1/4W	
R331	1-249-430-11	CARBON	12K	5%	1/4W	
R401	1-247-881-00	CARBON	120K	5%	1/4W	
R402	1-249-409-11	CARBON	220	5%	1/4W	
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-247-889-00	CARBON	270K	5%	1/4W	
R405	1-247-858-11	CARBON	13K	5%	1/4W	
R411	1-247-881-00	CARBON	120K	5%	1/4W	
R412	1-247-807-31	CARBON	100	5%	1/4W	
R414	1-247-882-11	CARBON	130K	5%	1/4W	
R415	1-247-850-11	CARBON	6.2K	5%	1/4W	
R431	1-249-430-11	CARBON	12K	5%	1/4W	
R601	1-249-409-11	CARBON	220	5%	1/4W	
R602	1-249-409-11	CARBON	220	5%	1/4W	
R608	1-249-409-11	CARBON	220	5%	1/4W	
R609	1-249-433-11	CARBON	22K	5%	1/4W	
R611	1-249-409-11	CARBON	220	5%	1/4W	
R612	1-249-409-11	CARBON	220	5%	1/4W	
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
R623	1-249-432-11	CARBON	18K	5%	1/4W	
R624	1-249-432-11	CARBON	18K	5%	1/4W	
R625	1-249-429-11	CARBON	10K	5%	1/4W	
R651	1-247-856-00	CARBON	11K	5%	1/4W	
R652	1-247-856-00	CARBON	11K	5%	1/4W	
R653	1-249-441-11	CARBON	100K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K				
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K				
RV341	1-238-551-11	RES, ADJ, CARBON 220K				
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K				
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K				
RV441	1-238-551-11	RES, ADJ, CARBON 220K				
RV651	1-238-599-11	RES, ADJ, CARBON 4.7K				
RV652	1-238-599-11	RES, ADJ, CARBON 4.7K				
		< TRANSFORMER >				
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION				
**********						
*	A-4699-515-A	BD BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V	
C102	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C103	1-164-346-11	CERAMIC CHIP	1uF		16V	
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C107	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	
C111	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C112	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C113	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V	
C116	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V	
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C118	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C119	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C120	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V	
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C127	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V	
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V	
C131	1-164-346-11	CERAMIC CHIP	1uF		16V	
C140	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V	
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C161	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C162	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C163	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C164	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V	
C165	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C166	1-163-137-00	CERAMIC CHIP	680PF	5%	50V	
C167	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C168	1-163-137-00	CERAMIC CHIP	680PF	5%	50V	
C169	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C170	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C171	1-163-237-11	CERAMIC CHIP	27PF	5%	50V	
C173	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C174	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C175	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C176	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C177	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C178	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C179	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C181	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C182	1-126-393-11	ELECT	33uF	20%	10V	
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C185	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C188	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

BD **CD SW**

Ref. No.	Part No.	Description				Remark
C189	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
		< CONNECTOR >				
CNU101	1-777-937-11	CONNECTOR, FFC/FPC 16P				
CNU102	1-778-874-11	CONNECTOR, FFC(LIF(NON-ZIF))19P				
		< FERRITE BEAD >				
FB101	1-414-234-11	INDUCTOR, FERRITE BEAD				
FB103	1-414-234-11	INDUCTOR, FERRITE BEAD				
		< IC >				
IC101	8-752-080-62	IC CXA1992AR				
IC102	8-759-429-32	IC BA5941FP-E2				
IC103	8-752-378-66	IC CXD2519Q				
		< CHIP CONDUCTOR >				
JW101	1-216-295-00	CONDUCTOR, CHIP (2012)				
JW104	1-216-295-00	CONDUCTOR, CHIP (2012)				
		< TRANSISTOR >				
Q101	8-729-010-08	TRANSISTOR MSB710-R				
		< RESISTOR >				
R102	1-216-001-00	METAL CHIP	10	5%	1/10W	
R104	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R105	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R106	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R107	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R108	1-216-088-00	METAL CHIP	43K	5%	1/10W	
R109	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R117	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R118	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R119	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R120	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R121	1-216-114-00	METAL GLAZE	510K	5%	1/10W	
R122	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R126	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R127	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R128	1-216-098-00	METAL CHIP	110K	5%	1/10W	
R129	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R134	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R137	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R138	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R158	1-216-001-00	METAL CHIP	10	5%	1/10W	
R159	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R161	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R163	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R164	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R165	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R166	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R167	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R168	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R169	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R170	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R172	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R173	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R174	1-216-033-00	METAL CHIP	220	5%	1/10W	
R175	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R176	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R177	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R178	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R179	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R180	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R181	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R188	1-216-037-00	METAL CHIP	330	5%	1/10W	
R190	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R191	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
		< SWITCH >				
S101	1-572-085-11	SWITCH, LEAF (LIMIT)				
		< VIBRATOR >				
X101	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)				
**********						
*	A-4392-348-A	CD SW BOARD, COMPLETE				
		**********				
		< CONNECTOR >				
* CN602	1-568-824-11	SOCKET, CONNECTOR 5P				
CN606	1-568-853-11	SOCKET, CONNECTOR 10P				

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D626	8-719-056-13	DIODE SML79423C-TP15	
			(DISC IN/PLAY: DISC 1)
D627	8-719-056-13	DIODE SML79423C-TP15	
			(DISC IN/PLAY: DISC 1)
D628	8-719-056-13	DIODE SML79423C-TP15	
			(DISC IN/PLAY: DISC 2)
D629	8-719-056-13	DIODE SML79423C-TP15	
			(DISC IN/PLAY: DISC 2)
D630	8-719-056-13	DIODE SML79423C-TP15	
			(DISC IN/PLAY: DISC 3)
D631	8-719-056-13	DIODE SML79423C-TP15	
			(DISC IN/PLAY: DISC 3)
D632	8-719-058-03	DIODE SEL5423E-TP15 (PLAY)	
D633	8-719-063-91	DIODE SLR325DC-P-T32 (PAUSE)	
		< TRANSISTOR >	
Q612	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q613	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q614	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q616	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		< RESISTOR >	
R709	1-249-401-11	CARBON 47 5% 1/4W	
R710	1-249-413-11	CARBON 470 5% 1/4W	
R711	1-247-815-91	CARBON 220 5% 1/4W	
R712	1-249-411-11	CARBON 330 5% 1/4W	
R713	1-249-413-11	CARBON 470 5% 1/4W	
R714	1-249-415-11	CARBON 680 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-249-419-11	CARBON 1.5K 5% 1/4W	
R717	1-249-421-11	CARBON 2.2K 5% 1/4W	
R718	1-247-804-11	CARBON 75 5% 1/4W	
R719	1-247-804-11	CARBON 75 5% 1/4W	
R720	1-247-804-11	CARBON 75 5% 1/4W	
R721	1-247-804-11	CARBON 75 5% 1/4W	
R722	1-247-804-11	CARBON 75 5% 1/4W	
R723	1-247-804-11	CARBON 75 5% 1/4W	
R724	1-247-807-31	CARBON 100 5% 1/4W	
R725	1-247-807-31	CARBON 100 5% 1/4W	
R791	1-247-804-11	CARBON 75 5% 1/4W	
R792	1-247-804-11	CARBON 75 5% 1/4W	
R793	1-247-804-11	CARBON 75 5% 1/4W	
R794	1-247-804-11	CARBON 75 5% 1/4W	
R795	1-247-804-11	CARBON 75 5% 1/4W	
R796	1-247-804-11	CARBON 75 5% 1/4W	
		< SWITCH >	
S645	1-762-196-21	SWITCH, TACT (POWER)	
S646	1-762-196-21	SWITCH, TACT (⏮ ◀◀)	
S647	1-762-196-21	SWITCH, TACT (▶▶ ⏭)	
S648	1-762-196-21	SWITCH, TACT (DISC SKIP EX-CHANGE)	
S649	1-762-196-21	SWITCH, TACT (DISC 1)	
S650	1-762-196-21	SWITCH, TACT (DISC 2)	
S651	1-762-196-21	SWITCH, TACT (DISC 3)	
S652	1-762-196-21	SWITCH, TACT (■)	
S653	1-762-196-21	SWITCH, TACT (⏏ OPEN/CLOSE)	
S654	1-762-196-21	SWITCH, TACT (▷/II)	
**********			
*	1-658-575-11	CONNECTOR BOARD	
		**********	
		< CONNECTOR >	
* CN701	1-568-946-11	PIN, CONNECTOR 8P	
CN702	1-750-413-11	CONNECTOR, FFC/FPC 8P	
		< TRANSISTOR >	
Q701	8-729-900-80	TRANSISTOR DTC114ES	
		< RESISTOR >	
R703	1-249-435-11	CARBON 33K 5% 1/4W	
R704	1-249-429-11	CARBON 10K 5% 1/4W	
R705	1-249-417-11	CARBON 1K 5% 1/4W	
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*	1-664-007-11	DECO BOARD	
		**********	
		< CONNECTOR >	
* CN605	1-568-848-11	SOCKET, CONNECTOR 5P	
		< DIODE >	
D619	8-719-058-04	DIODE SEL5223S-TP15 (RIGHT)	
D620	8-719-058-04	DIODE SEL5223S-TP15 (RIGHT)	
D621	8-719-058-04	DIODE SEL5223S-TP15 (CENTER)	
D622	8-719-058-03	DIODE SEL5423E-TP15 (CENTER)	
D623	8-719-058-04	DIODE SEL5223S-TP15 (CENTER)	
D624	8-719-058-04	DIODE SEL5223S-TP15 (LEFT)	
D625	8-719-058-04	DIODE SEL5223S-TP15 (LEFT)	
		< TRANSISTOR >	
Q610	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q611	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		< RESISTOR >	
R706	1-247-807-31	CARBON 100 5% 1/4W	
R707	1-247-807-31	CARBON 100 5% 1/4W	
R708	1-247-807-31	CARBON 100 5% 1/4W	
R746	1-247-807-31	CARBON 100 5% 1/4W	
**********			

HP/MIC | LEAF SWITCH | MAIN

Ref. No.	Part No.	Description				Remark
*	A-4392-351-A	HP/MIC BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C750	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C751	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C752	1-164-159-11	CERAMIC	0.1uF		50V	
C753	1-164-159-11	CERAMIC	0.1uF		50V	
C753	1-164-159-21	CERAMIC	0.1uF		50V	
C754	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C755	1-126-961-11	ELECT	2.2uF	20%	50V	
C756	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C757	1-162-215-31	CERAMIC	47PF	5%	50V	
C758	1-126-964-11	ELECT	10uF	20%	50V	
C759	1-126-959-11	ELECT	0.47uF	20%	50V	
C760	1-162-215-31	CERAMIC	47PF	5%	50V	
C761	1-162-282-31	CERAMIC	100PF	10%	50V	
C762	1-126-961-11	ELECT	2.2uF	20%	50V	
C764	1-126-964-11	ELECT	10uF	20%	50V	
C782	1-162-290-31	CERAMIC	470PF	10%	50V	
		< CONNECTOR >				
* CN750	1-568-828-11	SOCKET, CONNECTOR 9P				
		< IC >				
IC750	8-759-634-51	IC M5218AP				
		< JACK >				
J750	1-569-112-21	JACK, LARGE TYPE (PHONES)				
J751	1-569-112-21	JACK, LARGE TYPE (MIX MIC)				
		< RESISTOR >				
R750	1-249-429-11	CARBON	10K	5%	1/4W	
R751	1-249-417-11	CARBON	1K	5%	1/4W	
R752	1-249-441-11	CARBON	100K	5%	1/4W	
R753	1-249-417-11	CARBON	1K	5%	1/4W	
R754	1-249-433-11	CARBON	22K	5%	1/4W	
R755	1-249-429-11	CARBON	10K	5%	1/4W	
R756	1-247-885-00	CARBON	180K	5%	1/4W	
R757	1-247-807-31	CARBON	100	5%	1/4W	
		< VARIABLE RESISTOR >				
RV750	1-223-983-11	RES, VAR, CARBON 50K (MIC LEVEL)				
**********						
*	1-650-669-11	LEAF SWITCH BOARD				
		**********				
		< CONNECTOR >				
* CN1001	1-568-854-11	SOCKET, CONNECTOR 11P				
		< TRANSISTOR >				
Q1001	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA				
Q1002	8-749-010-90	TRANSISTOR PHOTO REFLECTOR NJL5165KA				
		< RESISTOR >				
R1001	1-247-818-11	CARBON	300	5%	1/4W	
R1002	1-247-820-11	CARBON	360	5%	1/4W	
R1003	1-249-414-11	CARBON	560	5%	1/4W	
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W	
R1005	1-247-818-11	CARBON	300	5%	1/4W	
		< SWITCH >				
S1001	1-692-832-11	SWITCH, PUSH (1 KEY) (A PLAY)				
S1002	1-692-832-11	SWITCH, PUSH (1 KEY) (B PLAY)				
S1003	1-571-281-21	SWITCH, LEAF (A HALF)				
S1004	1-571-281-21	SWITCH, LEAF (A CrO2)				
S1005	1-572-248-11	SWITCH, LEAF (REC A)				
S1006	1-572-248-11	SWITCH, LEAF (B HALF)				
S1008	1-571-281-21	SWITCH, LEAF (B CrO2)				
S1009	1-571-281-21	SWITCH, LEAF (REC B)				
**********						
*	A-4392-693-A	MAIN BOARD, COMPLETE (AEP, G, UK, AED)				
*	A-4392-694-A	MAIN BOARD, COMPLETE (EE, CIS)				
		**********				
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S				
		< CAPACITOR >				
C109	1-164-159-11	CERAMIC	0.1uF		50V	
C121	1-162-286-31	CERAMIC	220PF	10%	50V	
C122	1-162-286-31	CERAMIC	220PF	10%	50V	
C123	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C131	1-136-495-11	FILM	0.068uF	5%	50V	
C132	1-136-495-11	FILM	0.068uF	5%	50V	
C133	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C134	1-164-159-11	CERAMIC	0.1uF		50V	
C171	1-162-286-31	CERAMIC	220PF	10%	50V	
C172	1-162-286-31	CERAMIC	220PF	10%	50V	
C173	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C181	1-136-495-11	FILM	0.068uF	5%	50V	
C182	1-136-495-11	FILM	0.068uF	5%	50V	
C183	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C184	1-164-159-11	CERAMIC	0.1uF		50V	
C201	1-136-169-00	FILM	0.22uF	5%	50V	

Ref. No.	Part No.	Description				Remark
C202	1-136-169-00	FILM	0.22uF	5%	50V	
C203	1-130-493-00	MYLAR	0.068uF	5%	50V	
C204	1-130-493-00	MYLAR	0.068uF	5%	50V	
C205	1-130-486-00	MYLAR	0.018uF	10%	50V	
C206	1-130-486-00	MYLAR	0.018uF	10%	50V	
C207	1-130-480-00	MYLAR	0.0056uF	5%	50V	
C208	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C209	1-130-474-00	MYLAR	0.0018uF	5%	50V	
C210	1-126-964-11	ELECT	10uF	20%	50V	
C211	1-126-964-11	ELECT	10uF	20%	50V	
C212	1-130-483-00	MYLAR	0.01uF	5%	50V	
C213	1-136-165-00	FILM	0.1uF	5%	50V	
C214	1-136-165-00	FILM	0.1uF	5%	50V	
C215	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C216	1-136-167-00	FILM	0.15uF	5%	50V	
C221	1-126-967-11	ELECT	47uF	20%	10V	
C222	1-126-967-11	ELECT	47uF	20%	10V	
C223	1-126-964-11	ELECT	10uF	20%	50V	
C224	1-162-290-31	CERAMIC	470PF	10%	50V	
C226	1-126-964-11	ELECT	10uF	20%	50V	
C231	1-126-960-11	ELECT	1uF	20%	50V	
C251	1-136-169-00	FILM	0.22uF	5%	50V	
C252	1-136-169-00	FILM	0.22uF	5%	50V	
C253	1-130-493-00	MYLAR	0.068uF	5%	50V	
C254	1-130-493-00	MYLAR	0.068uF	5%	50V	
C255	1-130-486-00	MYLAR	0.018uF	10%	50V	
C256	1-130-486-00	MYLAR	0.018uF	10%	50V	
C257	1-130-480-00	MYLAR	0.0056uF	5%	50V	
C258	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C259	1-130-474-00	MYLAR	0.0018uF	5%	50V	
C260	1-126-964-11	ELECT	10uF	20%	50V	
C261	1-126-964-11	ELECT	10uF	20%	50V	
C262	1-130-483-00	MYLAR	0.01uF	5%	50V	
C263	1-136-165-00	FILM	0.1uF	5%	50V	
C264	1-136-165-00	FILM	0.1uF	5%	50V	
C276	1-126-964-11	ELECT	10uF	20%	50V	
C281	1-126-933-11	ELECT	100uF	20%	10V	
C282	1-126-961-11	ELECT	2.2uF	20%	50V	
C283	1-126-933-11	ELECT	100uF	20%	10V	
C284	1-126-923-11	ELECT	220uF	20%	10V	
C291	1-126-959-11	ELECT	0.47uF	20%	50V	
C301	1-126-967-11	ELECT	47uF	20%	10V	
C302	1-164-159-11	CERAMIC	0.1uF		50V	
C303	1-136-165-00	FILM	0.1uF	5%	50V	
C304	1-126-926-11	ELECT	1000uF	20%	10V	
C305	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C309	1-102-514-11	CERAMIC	22PF	5%	50V	
C310	1-102-514-11	CERAMIC	22PF	5%	50V	
C311	1-164-159-11	CERAMIC	0.1uF		50V	
C315	1-126-933-11	ELECT	100uF	20%	10V	
C316	1-136-165-00	FILM	0.1uF	5%	50V	

Ref. No.	Part No.	Description				Remark
C390	1-126-933-11	ELECT	100uF	20%	10V	
C391	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C392	1-126-933-11	ELECT	100uF	20%	10V	
C393	1-126-925-11	ELECT	470uF	20%	10V	
C394	1-164-159-11	CERAMIC	0.1uF		50V	
C395	1-162-282-31	CERAMIC	100PF	10%	50V	
C396	1-126-961-11	ELECT	2.2uF	20%	50V	
C398	1-126-961-11	ELECT	2.2uF	20%	50V	
C903	1-136-165-00	FILM	0.1uF	5%	50V	
C904	1-126-937-11	ELECT	4700uF	20%	16V	
C906	1-126-933-11	ELECT	100uF	20%	10V	
C909	1-126-964-11	ELECT	10uF	20%	50V	
C910	1-126-933-11	ELECT	100uF	20%	10V	
C911	1-126-964-11	ELECT	10uF	20%	50V	
C912	1-126-916-11	ELECT	1000uF	20%	6.3V	
C913	1-126-943-11	ELECT	2200uF	20%	25V	
C914	1-126-767-11	ELECT	1000uF	20%	16V	
C915	1-126-967-11	ELECT	47uF	20%	16V	
C916	1-164-159-11	CERAMIC	0.1uF		50V	
C917	1-126-968-11	ELECT	100uF	20%	50V	
C918	1-126-968-11	ELECT	100uF	20%	50V	
C919	1-126-964-11	ELECT	10uF	20%	50V	
C920	1-126-947-11	ELECT	47uF	20%	35V	
C953	1-136-165-00	FILM	0.1uF	5%	50V	
C954	1-126-768-11	ELECT	2200uF	20%	16V	
C956	1-126-933-11	ELECT	100uF	20%	10V	
C1501	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C1502	1-162-290-31	CERAMIC	470PF	10%	50V	
C1503	1-164-159-11	CERAMIC	0.1uF		50V	
C1504	1-126-160-11	ELECT	1uF	20%	50V	
C1505	1-126-964-11	ELECT	10uF	20%	50V	
C1506	1-126-157-11	ELECT	10uF	20%	16V	
C1507	1-126-160-11	ELECT	1uF	20%	50V	
C1508	1-126-933-11	ELECT	100uF	20%	10V	
C1522	1-126-964-11	ELECT	10uF	20%	50V	
C1523	1-126-933-11	ELECT	100uF	20%	16V	
C1531	1-164-159-11	CERAMIC	0.1uF		50V	
C1532	1-164-159-11	CERAMIC	0.1uF		50V	
C1533	1-164-159-11	CERAMIC	0.1uF		50V	
C1534	1-126-935-11	ELECT	470uF	20%	16V	
C1551	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C1552	1-162-290-31	CERAMIC	470PF	10%	50V	
C1553	1-164-159-11	CERAMIC	0.1uF		50V	
C1554	1-126-960-11	ELECT	1uF	20%	50V	
C1555	1-126-964-11	ELECT	10uF	20%	50V	
C1556	1-126-964-11	ELECT	10uF	20%	50V	
C1577	1-126-960-11	ELECT	1uF	20%	50V	
C1558	1-126-933-11	ELECT	100uF	20%	10V	
		< CONNECTOR >				
CN101	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P				

MAIN

Ref. No.	Part No.	Description	Remark
* CN102	1-568-836-11	SOCKET, CONNECTOR 17P	
* CN201	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN202	1-568-862-11	SOCKET, CONNECTOR 19P	
* CN203	1-568-946-11	PIN, CONNECTOR 8P	
* CN204	1-568-947-11	PIN, CONNECTOR 9P	
CN205	1-568-838-11	SOCKET, CONNECTOR 21P	
* CN206	1-568-830-11	SOCKET, CONNECTOR 11P	
* CN207	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P	
		< DIODE >	
D141	8-719-987-63	DIODE 1N4148M	
D281	8-719-987-63	DIODE 1N4148M	
D291	8-719-987-63	DIODE 1N4148M	
D301	8-719-024-99	DIODE 11ES2-NTA2B	
D302	8-719-024-99	DIODE 11ES2-NTA2B	
D303	8-719-987-63	DIODE 1N4148M	
D304	8-719-987-63	DIODE 1N4148M	
D305	8-719-987-63	DIODE 1N4148M	
D306	8-719-987-63	DIODE 1N4148M	
D307	8-719-987-63	DIODE 1N4148M	
D902	8-719-024-99	DIODE 11ES2-NTA2B	
D903	8-719-024-99	DIODE 11ES2-NTA2B	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
D905	8-719-024-99	DIODE 11ES2-NTA2B	
D906	8-719-024-99	DIODE 11ES2-NTA2B	
D907	8-719-024-99	DIODE 11ES2-NTA2B	
D908	8-719-024-99	DIODE 11ES2-NTA2B	
D909	8-719-024-99	DIODE 11ES2-NTA2B	
D910	8-719-011-18	DIODE UZ-33BSC	
D911	8-719-010-43	DIODE UZ-5.6BSC	
D912	8-719-987-63	DIODE 1N4148M	
D913	8-719-024-99	DIODE 11ES2-NTA2B	
D914	8-719-024-99	DIODE 11ES2-NTA2B	
D915	8-719-001-42	DIODE UZL-11M1	
D951	8-719-987-63	DIODE 1N4148M	
D952	8-719-987-63	DIODE 1N4148M	
		< GROUND PLATE >	
* EPT101	4-870-539-11	PLATE, GROUND	
		< FERRITE BEAD >	
FB302	1-412-473-21	INDUCTOR 0UH	
		< IC >	
IC102	8-759-000-48	IC MC14052BCP	
IC201	8-759-460-02	IC M62427FP-A	
IC231	8-759-634-50	IC M5218AL	
IC281	8-759-111-68	IC uPC1237HA	
IC301	8-759-464-50	IC uPD780018YGF-015-3BA	
IC302	8-759-635-63	IC M51943BSL	
IC391	8-749-923-04	IC TOTX178	
IC901	8-759-288-53	IC LA5617	
IC902	8-759-604-86	IC M5F7807L	
IC903	8-759-231-53	IC TA7805S	
IC904	8-759-604-39	IC M5F78M12	
IC1501	8-759-363-21	IC HA12203NT	
IC1502	8-759-822-09	IC LB1641	
		< COIL >	
L131	1-420-872-00	COIL, AIR-CORE	
L181	1-420-872-00	COIL, AIR-CORE	
L301	1-410-509-11	INDUCTOR 10uH	
L392	1-410-521-11	INDUCTOR 100uH	
L393	1-410-515-11	INDUCTOR 33uH	
		< JACK >	
J101	1-695-188-31	JACK, PIN 4P (VIDEO/MD, IN/OUT)	
		< TRANSISTOR >	
Q101	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q102	8-729-900-63	TRANSISTOR DTA124ES	
Q103	8-729-900-36	TRANSISTOR DTC124ES	
Q141	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q142	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q151	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q202	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q203	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q204	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q231	8-729-900-63	TRANSISTOR DTA124ES	
Q232	8-729-900-63	TRANSISTOR DTA124ES	
Q252	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q253	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q254	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q281	8-729-900-36	TRANSISTOR DTC124ES	
Q282	8-729-900-63	TRANSISTOR DTA124ES	
Q283	8-729-900-36	TRANSISTOR DTC124ES	
Q301	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q901	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q902	8-729-900-36	TRANSISTOR DTC124ES	
Q903	8-729-030-18	TRANSISTOR 2SD2525	
Q904	8-729-030-19	TRANSISTOR 2SB1640	
Q905	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q906	8-729-900-63	TRANSISTOR DTA124ES	
Q907	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q1531	8-729-801-93	TRANSISTOR 2SD1387	
Q1532	8-729-900-80	TRANSISTOR DTC114ES	
Q1533	8-729-900-80	TRANSISTOR DTC114ES	
Q1534	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q1535	8-729-900-80	TRANSISTOR DTC114ES	

Ref. No.	Part No.	Description				Remark
		< RESISTOR >				
R121	1-249-424-11	CARBON	3.9K	5%	1/4W	
R122	1-247-887-00	CARBON	220K	5%	1/4W	
R123	1-249-426-11	CARBON	5.6K	5%	1/4W	
R124	1-249-429-11	CARBON	10K	5%	1/4W	
R125	1-249-441-11	CARBON	100K	5%	1/4W	
R126	1-249-417-11	CARBON	1K	5%	1/4W	
R127	1-249-441-11	CARBON	100K	5%	1/4W	
R131	1-260-076-11	CARBON	10	5%	1/2W	
R132	1-260-076-11	CARBON	10	5%	1/2W	
R133	1-260-091-11	CARBON	220	5%	1/2W	
R134	1-260-091-11	CARBON	220	5%	1/2W	
R140	1-249-429-11	CARBON	10K	5%	1/4W	
R141	1-249-437-11	CARBON	47K	5%	1/4W	
R142	1-249-429-11	CARBON	10K	5%	1/4W	
⚠R147	1-216-455-11	METAL OXIDE	560	5%	2W	F
R171	1-249-424-11	CARBON	3.9K	5%	1/4W	
R172	1-247-887-00	CARBON	220K	5%	1/4W	
R173	1-249-426-11	CARBON	5.6K	5%	1/4W	
R174	1-249-429-11	CARBON	10K	5%	1/4W	
R176	1-249-417-11	CARBON	1K	5%	1/4W	
R177	1-249-441-11	CARBON	100K	5%	1/4W	
R181	1-260-076-11	CARBON	10	5%	1/2W	
R182	1-260-076-11	CARBON	10	5%	1/2W	
R183	1-260-091-11	CARBON	220	5%	1/2W	
R184	1-260-091-11	CARBON	220	5%	1/2W	
R201	1-249-429-11	CARBON	10K	5%	1/4W	
R202	1-249-433-11	CARBON	22K	5%	1/4W	
R203	1-249-441-11	CARBON	100K	5%	1/4W	
R205	1-249-433-11	CARBON	22K	5%	1/4W	
R206	1-249-421-11	CARBON	2.2K	5%	1/4W	
R207	1-249-431-11	CARBON	15K	5%	1/4W	
R209	1-249-441-11	CARBON	100K	5%	1/4W	
R210	1-247-903-00	CARBON	1M	5%	1/4W	
R212	1-249-419-11	CARBON	1.5K	5%	1/4W	
R213	1-249-433-11	CARBON	22K	5%	1/4W	
R214	1-247-887-00	CARBON	220K	5%	1/4W	
R215	1-247-903-00	CARBON	1M	5%	1/4W	
R216	1-249-429-11	CARBON	10K	5%	1/4W	
R217	1-249-437-11	CARBON	47K	5%	1/4W	
R221	1-249-425-11	CARBON	4.7K	5%	1/4W	
R222	1-249-425-11	CARBON	4.7K	5%	1/4W	
R226	1-249-421-11	CARBON	2.2K	5%	1/4W	
R227	1-249-441-11	CARBON	100K	5%	1/4W	
R228	1-249-429-11	CARBON	10K	5%	1/4W	
R231	1-249-437-11	CARBON	47K	5%	1/4W	
R232	1-249-437-11	CARBON	47K	5%	1/4W	
R234	1-247-886-11	CARBON	200K	5%	1/4W	
R235	1-249-421-11	CARBON	2.2K	5%	1/4W	
R236	1-249-441-11	CARBON	100K	5%	1/4W	
R253	1-249-441-11	CARBON	100K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R257	1-249-431-11	CARBON	15K	5%	1/4W	
R259	1-249-441-11	CARBON	100K	5%	1/4W	
R260	1-247-903-00	CARBON	1M	5%	1/4W	
R262	1-249-419-11	CARBON	1.5K	5%	1/4W	
R263	1-249-433-11	CARBON	22K	5%	1/4W	
R264	1-247-887-00	CARBON	220K	5%	1/4W	
R265	1-247-903-00	CARBON	1M	5%	1/4W	
R266	1-249-429-11	CARBON	10K	5%	1/4W	
R267	1-249-437-11	CARBON	47K	5%	1/4W	
R271	1-249-425-11	CARBON	4.7K	5%	1/4W	
R272	1-249-425-11	CARBON	4.7K	5%	1/4W	
R276	1-249-421-11	CARBON	2.2K	5%	1/4W	
R277	1-249-441-11	CARBON	100K	5%	1/4W	
R278	1-249-429-11	CARBON	10K	5%	1/4W	
R281	1-249-425-11	CARBON	4.7K	5%	1/4W	
R282	1-249-425-11	CARBON	4.7K	5%	1/4W	
R283	1-249-435-11	CARBON	33K	5%	1/4W	
R284	1-249-397-11	CARBON	22	5%	1/4W	
R285	1-249-441-11	CARBON	100K	5%	1/4W	
R286	1-249-429-11	CARBON	10K	5%	1/4W	
R287	1-249-427-11	CARBON	6.8K	5%	1/4W	
R288	1-249-438-11	CARBON	56K	5%	1/4W	
R289	1-249-437-11	CARBON	47K	5%	1/4W	
R291	1-249-433-11	CARBON	22K	5%	1/4W	
R292	1-249-433-11	CARBON	22K	5%	1/4W	
R293	1-249-417-11	CARBON	1K	5%	1/4W	
R294	1-249-441-11	CARBON	100K	5%	1/4W	
R295	1-247-903-00	CARBON	1M	5%	1/4W	
R301	1-249-413-11	CARBON	470	5%	1/4W	
R302	1-249-425-11	CARBON	4.7K	5%	1/4W	
R303	1-249-437-11	CARBON	47K	5%	1/4W	
R304	1-249-437-11	CARBON	47K	5%	1/4W	
R305	1-249-429-11	CARBON	10K	5%	1/4W	
R313	1-247-807-31	CARBON	100	5%	1/4W	
R316	1-249-429-11	CARBON	10K	5%	1/4W	
R318	1-249-429-11	CARBON	10K	5%	1/4W	
R319	1-249-429-11	CARBON	10K	5%	1/4W	
R320	1-249-429-11	CARBON	10K	5%	1/4W	
R322	1-249-425-11	CARBON	4.7K	5%	1/4W	
R323	1-247-807-31	CARBON	100	5%	1/4W	
R325	1-247-843-11	CARBON	3.3K	5%	1/4W	(AEP, UK, G, AED)
R325	1-249-427-11	CARBON	6.8K	5%	1/4W	(EE, CIS)
R326	1-249-427-11	CARBON	6.8K	5%	1/4W	(AEP, UK, G, AED)
R326	1-249-433-11	CARBON	22K	5%	1/4W	(EE, CIS)
R327	1-247-807-31	CARBON	100	5%	1/4W	
R328	1-247-807-31	CARBON	100	5%	1/4W	
R330	1-247-807-31	CARBON	100	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description			Remark
R331	1-247-807-31	CARBON	100	5%	1/4W
R332	1-247-807-31	CARBON	100	5%	1/4W
R333	1-247-807-31	CARBON	100	5%	1/4W
R339	1-247-807-31	CARBON	100	5%	1/4W
R340	1-247-807-31	CARBON	100	5%	1/4W
R341	1-247-807-31	CARBON	100	5%	1/4W
R342	1-247-807-31	CARBON	100	5%	1/4W
R343	1-247-807-31	CARBON	100	5%	1/4W
R344	1-247-807-31	CARBON	100	5%	1/4W
R345	1-247-807-31	CARBON	100	5%	1/4W
R347	1-247-807-31	CARBON	100	5%	1/4W
R348	1-247-807-31	CARBON	100	5%	1/4W
R349	1-247-807-31	CARBON	100	5%	1/4W
R350	1-247-807-31	CARBON	100	5%	1/4W
R351	1-247-807-31	CARBON	100	5%	1/4W
R352	1-247-807-31	CARBON	100	5%	1/4W
R353	1-247-807-31	CARBON	100	5%	1/4W
R354	1-247-807-31	CARBON	100	5%	1/4W
R355	1-247-807-31	CARBON	100	5%	1/4W
R356	1-247-807-31	CARBON	100	5%	1/4W
R357	1-247-807-31	CARBON	100	5%	1/4W
R358	1-247-807-31	CARBON	100	5%	1/4W
R359	1-247-807-31	CARBON	100	5%	1/4W
R361	1-247-807-31	CARBON	100	5%	1/4W
R362	1-247-807-31	CARBON	100	5%	1/4W
R363	1-247-807-31	CARBON	100	5%	1/4W
R364	1-247-807-31	CARBON	100	5%	1/4W
R366	1-247-807-31	CARBON	100	5%	1/4W
R367	1-249-429-11	CARBON	10K	5%	1/4W
R368	1-247-843-11	CARBON	3.3K	5%	1/4W
R370	1-249-429-11	CARBON	10K	5%	1/4W
R371	1-249-429-11	CARBON	10K	5%	1/4W
R372	1-249-429-11	CARBON	10K	5%	1/4W
R373	1-249-429-11	CARBON	10K	5%	1/4W
R381	1-247-807-31	CARBON	100	5%	1/4W
R384	1-249-429-11	CARBON	10K	5%	1/4W
R395	1-247-807-31	CARBON	100	5%	1/4W
R396	1-249-435-11	CARBON	33K	5%	1/4W
R397	1-247-807-31	CARBON	100	5%	1/4W
R398	1-249-435-11	CARBON	33K	5%	1/4W
R417	1-249-441-11	CARBON	100K	5%	1/4W
R913	1-249-409-11	CARBON	220	5%	1/4W
R914	1-249-417-11	CARBON	1K	5%	1/4W
R915	1-249-425-11	CARBON	4.7K	5%	1/4W
R916	1-249-409-11	CARBON	220	5%	1/4W
R917	1-249-409-11	CARBON	220	5%	1/4W
R918	1-249-425-11	CARBON	4.7K	5%	1/4W
R920	1-249-417-11	CARBON	1K	5%	1/4W
R921	1-247-895-00	CARBON	470K	5%	1/4W
R951	1-249-425-11	CARBON	4.7K	5%	1/4W
R952	1-249-425-11	CARBON	4.7K	5%	1/4W
R1501	1-249-435-11	CARBON	33K	5%	1/4W
R1502	1-249-417-11	CARBON	1K	5%	1/4W
R1503	1-249-426-11	CARBON	5.6K	5%	1/4W
R1504	1-247-840-00	CARBON	2.4K	5%	1/4W
R1505	1-249-433-11	CARBON	22K	5%	1/4W
R1506	1-249-421-11	CARBON	2.2K	5%	1/4W
R1507	1-249-428-11	CARBON	8.2K	5%	1/4W
R1521	1-249-430-11	CARBON	12K	5%	1/4W
R1522	1-249-426-11	CARBON	5.6K	5%	1/4W
R1524	1-249-429-11	CARBON	10K	5%	1/4W
R1525	1-249-432-11	CARBON	18K	5%	1/4W
R1526	1-249-429-11	CARBON	10K	5%	1/4W
R1527	1-249-429-11	CARBON	10K	5%	1/4W
R1531	1-247-843-11	CARBON	3.3K	5%	1/4W
R1532	1-249-411-11	CARBON	330	5%	1/4W
R1533	1-249-427-11	CARBON	6.8K	5%	1/4W
R1534	1-249-429-11	CARBON	10K	5%	1/4W
R1535	1-249-425-11	CARBON	4.7K	5%	1/4W
R1536	1-249-425-11	CARBON	4.7K	5%	1/4W
R1541	1-249-425-11	CARBON	4.7K	5%	1/4W
R1542	1-249-425-11	CARBON	4.7K	5%	1/4W
R1543	1-249-425-11	CARBON	4.7K	5%	1/4W
R1544	1-249-417-11	CARBON	1K	5%	1/4W
R1545	1-249-437-11	CARBON	47K	5%	1/4W
R1546	1-249-437-11	CARBON	47K	5%	1/4W
R1547	1-249-437-11	CARBON	47K	5%	1/4W
R1548	1-249-437-11	CARBON	47K	5%	1/4W
R1551	1-249-433-11	CARBON	22K	5%	1/4W
R1552	1-249-417-11	CARBON	1K	5%	1/4W
R1553	1-249-426-11	CARBON	5.6K	5%	1/4W
R1554	1-247-840-00	CARBON	2.4K	5%	1/4W
R1555	1-249-433-11	CARBON	22K	5%	1/4W
R1556	1-249-421-11	CARBON	2.2K	5%	1/4W
R1557	1-249-428-11	CARBON	8.2K	5%	1/4W

< VARIABLE RESISTOR >

RV1501	1-238-598-11	RES, ADJ, CARBON 2.2K
RV1551	1-238-598-11	RES, ADJ, CARBON 2.2K

< RELAY >

RY141	1-755-126-11	RELAY

< TERMINAL >

TM131	1-537-240-31	TERMINAL BOARD (CHECKER PIN)
TM132	1-537-240-31	TERMINAL BOARD (CHECKER PIN)

< VIBRATOR >

X301	1-760-489-11	VIBRATOR, CERAMIC (5MHz)
X302	1-567-098-41	VIBRATOR, CRYSTAL (32.768KHz)

****

Ref. No.	Part No.	Description				Remark
		MOTOR BOARD				
		**********				
		(Included in AUDIO BOARD, COMPLETE)				
		< CAPACITOR >				
C651	1-161-494-00	CERAMIC	0.022uF		25V	
**********						
*	1-658-578-11	MOTOR (SLIDE) BOARD				
		**********				
		< CAPACITOR >				
C801	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C804	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C805	1-126-964-11	ELECT	10uF	20%	50V	
		< CONNECTOR >				
* CN801	1-568-947-11	PIN, CONNECTOR 9P				
		< DIODE >				
D801	8-719-010-43	DIODE UZ-5.6BSC				
D804	8-719-987-63	DIODE 1N4148M				
D805	8-719-987-63	DIODE 1N4148M				
		< IC >				
IC801	8-759-274-09	IC BA6286N				
		< RESISTOR >				
R801	1-249-401-11	CARBON	47	5%	1/4W	
		< SWITCH >				
S801	1-762-527-11	SWITCH, ROTARY (OPEN/CLOSE DET)				
**********						
*	1-658-577-11	MOTOR (TURN) BOARD				
		**********				
		< CAPACITOR >				
C701	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C702	1-126-964-11	ELECT	10uF	20%	50V	
C705	1-162-306-11	CERAMIC	0.01uF	20%	16V	
		< CONNECTOR >				
CN703	1-750-413-11	CONNECTOR, FFC/FPC 8P				
CN704	1-506-469-11	PIN, CONNECTOR 4P				
		< DIODE >				
D701	8-719-010-23	DIODE UZ-3.6BSB				

Ref. No.	Part No.	Description				Remark
		< IC >				
IC701	8-759-633-65	IC M54641L				
		< RESISTOR >				
R706	1-249-411-11	CARBON	330	5%	1/4W	
R707	1-249-401-11	CARBON	47	5%	1/4W	
**********						
*	A-4392-340-A	PANEL BOARD, COMPLETE				
		**********				
*	4-932-810-11	CUSHION (FL)				
*	4-986-870-01	HOLDER, FL TUBE				
		< CAPACITOR >				
C601	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C602	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C603	1-124-589-11	ELECT	47uF	20%	16V	
C604	1-126-163-11	ELECT	4.7uF	20%	50V	
C605	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C606	1-126-160-11	ELECT	1uF	20%	50V	
C607	1-126-160-11	ELECT	1uF	20%	50V	
C608	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C609	1-162-282-31	CERAMIC	100PF	10%	50V	
C610	1-162-282-31	CERAMIC	100PF	10%	50V	
C611	1-162-282-31	CERAMIC	100PF	10%	50V	
C612	1-162-282-31	CERAMIC	100PF	10%	50V	
C613	1-162-282-31	CERAMIC	100PF	10%	50V	
C614	1-162-282-31	CERAMIC	100PF	10%	50V	
C615	1-162-282-31	CERAMIC	100PF	10%	50V	
C616	1-162-282-31	CERAMIC	100PF	10%	50V	
C617	1-162-282-31	CERAMIC	100PF	10%	50V	
C618	1-162-282-31	CERAMIC	100PF	10%	50V	
C619	1-162-282-31	CERAMIC	100PF	10%	50V	
C620	1-162-282-31	CERAMIC	100PF	10%	50V	
C621	1-162-282-31	CERAMIC	100PF	10%	50V	
C622	1-162-282-31	CERAMIC	100PF	10%	50V	
C623	1-162-282-31	CERAMIC	100PF	10%	50V	
C624	1-162-290-31	CERAMIC	470PF	10%	50V	
C625	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C626	1-124-589-11	ELECT	47uF	20%	16V	
C627	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C628	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C629	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C630	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C636	1-126-160-11	ELECT	1uF	20%	50V	
C637	1-130-491-00	MYLAR	0.047uF	5%	50V	
C638	1-124-464-11	ELECT	0.22uF	20%	50V	
C639	1-124-464-11	ELECT	0.22uF	20%	50V	
C640	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C641	1-124-464-11	ELECT	0.22uF	20%	50V	

PANEL

Ref. No.	Part No.	Description				Remark
C642	1-130-489-00	MYLAR	0.033uF	5%	50V	
C643	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C644	1-124-464-11	ELECT	0.22uF	20%	50V	
C646	1-130-470-00	MYLAR	820PF	5%	50V	
C647	1-124-464-11	ELECT	0.22uF	20%	50V	
C648	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C649	1-124-589-11	ELECT	47uF	20%	16V	
C650	1-124-464-11	ELECT	0.22uF	20%	50V	
C653	1-164-159-11	CERAMIC	0.1uF		50V	
C654	1-162-294-31	CERAMIC	0.001MF	10%	50V	
		< CONNECTOR >				
CN601	1-568-860-11	SOCKET, CONNECTOR 17P				
CN603	1-568-853-11	SOCKET, CONNECTOR 10P				
CN609	1-691-645-11	SOCKET, CONNECTOR 9P				
		< DIODE >				
D601	8-719-058-03	DIODE SEL5423E-TP15 (TUNER/BAND)				
D604	8-719-058-04	DIODE SEL5223S-TP15 (EFFECT ON/OFF)				
D605	8-719-058-04	DIODE SEL5223S-TP15 (JOG)				
D606	8-719-057-44	DIODE HLMF-K305 (▷▷I)				
D607	8-719-057-44	DIODE HLMF-K305 (I◁◁)				
D608	8-719-057-44	DIODE HLMF-K305 (+)				
D609	8-719-057-44	DIODE HLMF-K305 (–)				
D611	8-719-058-04	DIODE SEL5223S-TP15 (ENTER/NEXT)				
D614	8-719-057-44	DIODE HLMF-K305 (GROOVE)				
D615	8-719-058-04	DIODE SEL5223S-TP15 (NON STOP)				
D650	8-719-987-63	DIODE 1N4148M				
D651	8-719-987-63	DIODE 1N4148M				
D652	8-719-987-63	DIODE 1N4148M				
D653	8-719-987-63	DIODE 1N4148M				
D654	8-719-987-63	DIODE 1N4148M				
D655	8-719-987-63	DIODE 1N4148M				
D656	8-719-987-63	DIODE 1N4148M				
		< INDUCTOR >				
FB601	1-412-473-21	INDUCTOR (SMALL TYPE)				
		< FLUORESCENT INDICATOR TUBE >				
FL601	1-517-618-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC601	8-759-446-27	IC TMP87CH75F-6543				
IC602	8-759-332-18	IC GP1U27XB				
		< INDUCTOR >				
L601	1-408-117-00	INDUCTOR 10uH				

Ref. No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q601	8-729-118-00	TRANSISTOR 2SB1116-L				
Q602	8-729-118-00	TRANSISTOR 2SB1116-L				
Q603	8-729-119-78	TRANSISTOR 2SC403SP-51				
Q604	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q605	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q606	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q607	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q608	8-729-119-76	TRANSISTOR 2SA1175-HFE				
		< RESISTOR >				
R601	1-247-903-00	CARBON	1M	5%	1/4W	
R602	1-247-807-31	CARBON	100	5%	1/4W	
R603	1-249-429-11	CARBON	10K	5%	1/4W	
R604	1-249-429-11	CARBON	10K	5%	1/4W	
R605	1-249-429-11	CARBON	10K	5%	1/4W	
R606	1-249-429-11	CARBON	10K	5%	1/4W	
R607	1-249-429-11	CARBON	10K	5%	1/4W	
R608	1-247-843-11	CARBON	3.3K	5%	1/4W	
R609	1-247-843-11	CARBON	3.3K	5%	1/4W	
R610	1-247-807-31	CARBON	100	5%	1/4W	
R611	1-247-807-31	CARBON	100	5%	1/4W	
R612	1-249-429-11	CARBON	10K	5%	1/4W	
R615	1-249-429-11	CARBON	10K	5%	1/4W	
R616	1-249-429-11	CARBON	10K	5%	1/4W	
R617	1-249-407-11	CARBON	150	5%	1/4W	
R619	1-249-401-11	CARBON	47	5%	1/4W	
R620	1-249-419-11	CARBON	1.5K	5%	1/4W	
R621	1-249-419-11	CARBON	1.5K	5%	1/4W	
R622	1-249-401-11	CARBON	47	5%	1/4W	
R623	1-249-403-11	CARBON	68	5%	1/4W	
R624	1-247-807-31	CARBON	100	5%	1/4W	
R625	1-249-407-11	CARBON	150	5%	1/4W	
R626	1-249-407-11	CARBON	150	5%	1/4W	
R627	1-249-409-11	CARBON	220	5%	1/4W	
R628	1-249-411-11	CARBON	330	5%	1/4W	
R629	1-249-413-11	CARBON	470	5%	1/4W	
R630	1-249-415-11	CARBON	680	5%	1/4W	
R631	1-249-417-11	CARBON	1K	5%	1/4W	
R632	1-249-419-11	CARBON	1.5K	5%	1/4W	
R633	1-249-421-11	CARBON	2.2K	5%	1/4W	
R634	1-249-419-11	CARBON	1.5K	5%	1/4W	
R635	1-249-401-11	CARBON	47	5%	1/4W	
R636	1-249-403-11	CARBON	68	5%	1/4W	
R638	1-247-826-00	CARBON	620	5%	1/4W	
R639	1-249-411-11	CARBON	330	5%	1/4W	
R640	1-249-413-11	CARBON	470	5%	1/4W	
R641	1-249-415-11	CARBON	680	5%	1/4W	
R642	1-249-417-11	CARBON	1K	5%	1/4W	
R643	1-249-419-11	CARBON	1.5K	5%	1/4W	
R644	1-249-421-11	CARBON	2.2K	5%	1/4W	

Ref. No.	Part No.	Description			Remark
R645	1-249-419-11	CARBON	1.5K	5% 1/4W	
R646	1-249-401-11	CARBON	47	5% 1/4W	
R647	1-249-403-11	CARBON	68	5% 1/4W	
R648	1-247-807-31	CARBON	100	5% 1/4W	
R649	1-249-407-11	CARBON	150	5% 1/4W	
R651	1-249-407-11	CARBON	150	5% 1/4W	
R652	1-249-409-11	CARBON	220	5% 1/4W	
R653	1-249-411-11	CARBON	330	5% 1/4W	
R654	1-249-413-11	CARBON	470	5% 1/4W	
R655	1-249-415-11	CARBON	680	5% 1/4W	
R656	1-249-417-11	CARBON	1K	5% 1/4W	
R657	1-249-419-11	CARBON	1.5K	5% 1/4W	
R658	1-249-434-11	CARBON	27K	5% 1/4W	
R659	1-247-843-11	CARBON	3.3K	5% 1/4W	
R661	1-249-419-11	CARBON	1.5K	5% 1/4W	
R663	1-249-429-11	CARBON	10K	5% 1/4W	
R664	1-249-421-11	CARBON	2.2K	5% 1/4W	
R665	1-247-887-00	CARBON	220K	5% 1/4W	
R666	1-249-421-11	CARBON	2.2K	5% 1/4W	
R667	1-249-409-11	CARBON	220	5% 1/4W	
R668	1-249-409-11	CARBON	220	5% 1/4W	
R671	1-249-409-11	CARBON	220	5% 1/4W	
R672	1-249-409-11	CARBON	220	5% 1/4W	
R673	1-247-807-31	CARBON	100	5% 1/4W	
R674	1-247-807-31	CARBON	100	5% 1/4W	
R675	1-247-807-31	CARBON	100	5% 1/4W	
R676	1-247-807-31	CARBON	100	5% 1/4W	
R680	1-247-807-31	CARBON	100	5% 1/4W	
R681	1-249-409-11	CARBON	220	5% 1/4W	
R685	1-249-419-11	CARBON	1.5K	5% 1/4W	
R686	1-247-897-11	CARBON	560K	5% 1/4W	
R687	1-249-437-11	CARBON	47K	5% 1/4W	
R688	1-247-895-00	CARBON	470K	5% 1/4W	
R689	1-249-419-11	CARBON	1.5K	5% 1/4W	
R690	1-247-897-11	CARBON	560K	5% 1/4W	
R691	1-249-437-11	CARBON	47K	5% 1/4W	
R692	1-247-895-00	CARBON	470K	5% 1/4W	
R693	1-249-419-11	CARBON	1.5K	5% 1/4W	
R694	1-247-897-11	CARBON	560K	5% 1/4W	
R695	1-249-437-11	CARBON	47K	5% 1/4W	
R696	1-247-895-00	CARBON	470K	5% 1/4W	
R698	1-247-897-11	CARBON	560K	5% 1/4W	
R699	1-249-437-11	CARBON	47K	5% 1/4W	
R700	1-247-895-00	CARBON	470K	5% 1/4W	
R748	1-249-435-11	CARBON	33K	5% 1/4W	
R749	1-247-895-00	CARBON	470K	5% 1/4W	
		< SWITCH >			
S601	1-467-968-11	ENCODER, ROTARY (JOG)			
S602	1-467-869-11	ENCODER, ROTARY (VOLUME)			
S604	1-762-196-21	SWITCH, TACT (TIMER SELECT)			
S605	1-762-196-21	SWITCH, TACT (CLOCK TIMER SET)			
S606	1-762-196-21	SWITCH, TACT (DISPLAY/DEMO)			
S607	1-762-196-21	SWITCH, TACT (SPECTRAM ANALYZER)			
S608	1-762-196-21	SWITCH, TACT (DOLBY NR)			
S609	1-762-196-21	SWITCH, TACT (DIRECTION)			
S610	1-762-196-21	SWITCH, TACT (EDIT)			
S611	1-762-196-21	SWITCH, TACT (REPEAT)			
S612	1-762-196-21	SWITCH, TACT (PLAY MODE)			
S613	1-762-196-21	SWITCH, TACT (1/ALL DISCS)			
S614	1-762-196-21	SWITCH, TACT (SLEEP)			
S615	1-762-196-21	SWITCH, TACT (P FILE MEMORY)			
S616	1-762-196-21	SWITCH, TACT (NON STOP)			
S617	1-762-196-21	SWITCH, TACT (LOW FREQUENCY)			
S618	1-762-196-21	SWITCH, TACT (HIGH FREQUENCY)			
S620	1-762-196-21	SWITCH, TACT (ENTER/NEXT)			
S621	1-762-196-21	SWITCH, TACT (GROOVE)			
S622	1-762-196-21	SWITCH, TACT (GAME)			
S623	1-762-196-21	SWITCH, TACT (MOVIE)			
S624	1-762-196-21	SWITCH, TACT (MUSIC)			
S625	1-762-196-21	SWITCH, TACT (P FILE)			
S626	1-762-196-21	SWITCH, TACT (WAVE)			
S631	1-762-196-21	SWITCH, TACT (SURROUND)			
S632	1-762-196-21	SWITCH, TACT (DBFB)			
S633	1-762-196-21	SWITCH, TACT (TUNING MODE)			
S634	1-762-196-21	SWITCH, TACT (STEREO/MONO)			
S635	1-762-196-21	SWITCH, TACT (EFFECT ON/OFF)			
S636	1-762-196-21	SWITCH, TACT (KARAOKE PON/MPX)			
S637	1-762-196-21	SWITCH, TACT (TUNER/BAND)			
S638	1-762-196-21	SWITCH, TACT (LOOP)			
S639	1-762-196-21	SWITCH, TACT (FLASH)			
S640	1-762-196-21	SWITCH, TACT (TUNER MEMORY)			
S642	1-762-196-21	SWITCH, TACT (FUNCTION)			
		< VIBRATOR >			
X601	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			
**********					
*	A-4392-331-A	POWER AMP BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C801	1-124-720-11	ELECT	4.7uF	20% 35V	
C802	1-162-286-31	CERAMIC	220PF	10% 50V	
C803	1-162-282-31	CERAMIC	100PF	10% 50V	
C804	1-126-967-11	ELECT	47uF	20% 50V	
C806	1-126-967-11	ELECT	47uF	20% 50V	
C807	1-126-965-11	ELECT	22uF	20% 50V	
C809	1-126-965-11	ELECT	22uF	20% 50V	
C810	1-164-159-11	CERAMIC	0.1uF	50V	
C811	1-130-493-00	MYLAR	0.068uF	5% 50V	
C812	1-130-493-00	MYLAR	0.068uF	5% 50V	

Ref. No.	Part No.	Description				Remark
C814	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C841	1-126-925-11	ELECT	470uF	20%	10V	
C851	1-124-720-11	ELECT	4.7uF	20%	35V	
C852	1-162-286-31	CERAMIC	220PF	10%	50V	
C853	1-162-282-31	CERAMIC	100PF	10%	50V	
C854	1-126-967-11	ELECT	47uF	20%	50V	
C856	1-126-967-11	ELECT	47uF	20%	50V	
C857	1-126-965-11	ELECT	22uF	20%	50V	
C861	1-130-493-00	MYLAR	0.068uF	5%	50V	
C862	1-130-493-00	MYLAR	0.068uF	5%	50V	
C901	1-126-974-11	ELECT	3300uF	20%	50V	
C902	1-136-165-00	FILM	0.1uF	5%	50V	
C951	1-126-974-11	ELECT	3300uF	20%	50V	
C952	1-136-165-00	FILM	0.1uF	5%	50V	
		< CONNECTOR >				
CN801	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P				
		< DIODE >				
D801	8-719-987-63	DIODE 1N4148M				
D841	8-719-987-63	DIODE 1N4148M				
D842	8-719-987-63	DIODE 1N4148M				
D851	8-719-987-63	DIODE 1N4148M				
D901	8-719-028-23	DIODE D3SBA20-4101				
		< IC >				
IC801	8-749-920-09	IC STK-4152MK2K				
		< TRANSISTOR >				
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA				
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA				
		< RESISTOR >				
R801	1-249-417-11	CARBON	1K	5%	1/4W	
R802	1-249-437-11	CARBON	47K	5%	1/4W	
R803	1-249-415-11	CARBON	680	5%	1/4W	
R804	1-249-437-11	CARBON	47K	5%	1/4W	
R805	1-260-103-11	CARBON	2.2K	5%	1/2W	
R805	1-260-105-11	CARBON	3.3K	5%	1/2W	
R806	1-260-103-11	CARBON	2.2K	5%	1/2W	
⚠R807	1-212-881-11	FUSIBLE	100	5%	1/4W	F
⚠R808	1-208-601-11	WIREWOUND	0.1	10%	2W	F
R809	1-260-076-11	CARBON	10	5%	1/2W	
R811	1-249-417-11	CARBON	1K	5%	1/4W	
R812	1-249-433-11	CARBON	22K	5%	1/4W	
R813	1-249-441-11	CARBON	100K	5%	1/4W	
R814	1-260-099-11	CARBON	1K	5%	1/2W	
R816	1-260-099-11	CARBON	1K	5%	1/2W	
⚠R820	1-202-972-61	FUSIBLE	1	5%	1/4W	F
R841	1-249-429-11	CARBON	10K	5%	1/4W	
R842	1-247-881-00	CARBON	120K	5%	1/4W	
R843	1-249-421-11	CARBON	2.2K	5%	1/4W	
R844	1-249-429-11	CARBON	10K	5%	1/4W	
R851	1-249-417-11	CARBON	1K	5%	1/4W	
R852	1-249-437-11	CARBON	47K	5%	1/4W	
R853	1-249-415-11	CARBON	680	5%	1/4W	
R854	1-249-437-11	CARBON	47K	5%	1/4W	
R855	1-260-103-11	CARBON	2.2K	5%	1/2W	
R856	1-260-103-11	CARBON	2.2K	5%	1/2W	
⚠R857	1-212-881-11	FUSIBLE	100	5%	1/4W	F
⚠R858	1-208-601-11	WIREWOUND	0.1	10%	2W	F
R859	1-260-076-11	CARBON	10	5%	1/2W	
R861	1-249-417-11	CARBON	1K	5%	1/4W	
R862	1-249-433-11	CARBON	22K	5%	1/4W	
R863	1-249-441-11	CARBON	100K	5%	1/4W	
**********						
*	1-658-576-11	SENSOR BOARD				
		**********				
		< IC >				
IC702	8-749-924-18	IC PHOTO INTERRUPTER RPI-1391				
IC703	8-749-924-30	IC PHOTO REFLECTOR GP2S28				
		< RESISTOR >				
R701	1-249-416-11	CARBON	820	5%	1/4W	
R702	1-249-407-11	CARBON	150	5%	1/4W	
**********						
*	A-4392-350-A	TC SW BOARD, COMPLETE				
		**********				
		< CONNECTOR >				
CN607	1-506-486-11	PIN, CONNECTOR 7P				
		< DIODE >				
D634	8-719-063-92	DIODE SLR325MC-M (▷: DECK B)				
D635	8-719-063-92	DIODE SLR325MC-M (◁: DECK B)				
D636	8-719-063-91	DIODE SLR325DC-P (❚❚ PAUSE)				
D637	8-719-063-93	DIODE SLR325VC-N (● REC)				
D638	8-719-063-92	DIODE SLR325MC-M (▷: DECK A)				
D639	8-719-063-92	DIODE SLR325MC-M (◁: DECK A)				
		< TRANSISTOR >				
Q617	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q618	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q619	8-729-119-76	TRANSISTOR 2SA1175-HFE				
		< RESISTOR >				
R726	1-249-401-11	CARBON	47	5%	1/4W	
R727	1-249-403-11	CARBON	68	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description				Remark
R728	1-247-807-31	CARBON	100	5%	1/4W	
R729	1-249-407-11	CARBON	150	5%	1/4W	
R730	1-249-407-11	CARBON	150	5%	1/4W	
R731	1-249-409-11	CARBON	220	5%	1/4W	
R732	1-249-411-11	CARBON	330	5%	1/4W	
R733	1-249-413-11	CARBON	470	5%	1/4W	
R734	1-249-415-11	CARBON	680	5%	1/4W	
R735	1-249-417-11	CARBON	1K	5%	1/4W	
R736	1-249-419-11	CARBON	1.5K	5%	1/4W	
R737	1-249-421-11	CARBON	2.2K	5%	1/4W	
R738	1-247-843-11	CARBON	3.3K	5%	1/4W	
R739	1-249-427-11	CARBON	6.8K	5%	1/4W	
R740	1-247-807-31	CARBON	100	5%	1/4W	
R741	1-247-807-31	CARBON	100	5%	1/4W	
R742	1-247-807-31	CARBON	100	5%	1/4W	
R743	1-249-409-11	CARBON	220	5%	1/4W	
R744	1-247-807-31	CARBON	100	5%	1/4W	
R745	1-247-807-31	CARBON	100	5%	1/4W	
		< SWITCH >				
S655	1-762-196-21	SWITCH, TACT (▷: DECK B)				
S656	1-762-196-21	SWITCH, TACT (◁: DECK B)				
S657	1-762-196-21	SWITCH, TACT (▶▶: DECK B)				
S658	1-762-196-21	SWITCH, TACT (◀◀: DECK B)				
S659	1-762-196-21	SWITCH, TACT (■: DECK B)				
S660	1-762-196-21	SWITCH, TACT (❚❚ PAUSE)				
S661	1-762-196-21	SWITCH, TACT (● REC)				
S662	1-762-196-21	SWITCH, TACT (CD SYNCHRO)				
S663	1-762-196-21	SWITCH, TACT (HIGH SPEED DUBBING)				
S664	1-762-196-21	SWITCH, TACT (▶▶: DECK A)				
S665	1-762-196-21	SWITCH, TACT (◀◀: DECK A)				
S666	1-762-196-21	SWITCH, TACT (■: DECK A)				
S667	1-762-196-21	SWITCH, TACT (▷: DECK A)				
S668	1-762-196-21	SWITCH, TACT (◁: DECK A)				
**********						
*	A-4303-578-A	TCB BOARD, COMPLETE (EE, CIS)				
*	A-4303-574-A	TCB BOARD, COMPLETE (AEP, AED, G, UK)				
		**********				
		< CAPACITOR >				
C1	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C2	1-126-967-11	ELECT	47uF	20%	16V	
C3	1-163-038-91	CERAMIC	100000PF		25V	
C5	1-163-031-11	CERAMIC	10000PF		50V	
C6	1-163-038-91	CERAMIC	100000PF		25V	
C7	1-101-004-00	CERAMIC	0.01uF		50V	(EE, CIS)
C8	1-163-031-11	CERAMIC	10000PF		50V	
C9	1-163-031-11	CERAMIC	10000PF		50V	
C10	1-163-031-11	CERAMIC	10000PF		50V	
C16	1-163-038-91	CERAMIC	100000PF		25V	

Ref. No.	Part No.	Description				Remark
C19	1-163-249-11	CHIP CERAMIC	82PF			
C21	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C22	1-163-031-11	CERAMIC	10000PF		50V	
C23	1-163-235-11	CHIP CERAMIC	22PF	5%	50V	
C24	1-163-239-11	CHIP CERAMIC	33PF	5%	50V	
C26	1-126-967-11	ELECT	47uF	20%	16V	
C28	1-126-967-11	ELECT	47uF	20%	16V	
C29	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C30	1-126-961-11	ELECT	2.2uF	20%	50V	
C31	1-163-031-11	CERAMIC	10000PF		50V	
C32	1-163-038-91	CERAMIC	100000PF		25V	
C33	1-163-038-91	CERAMIC	100000PF		25V	
C34	1-163-229-11	CHIP CERAMIC	12PF	5%	50V	
C35	1-163-038-91	CERAMIC	100000PF		25V	
C36	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C37	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C39	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C40	1-163-031-11	CERAMIC	10000PF		50V	
C41	1-163-031-11	CERAMIC	10000PF		50V	
C42	1-163-038-91	CERAMIC	100000PF		25V	
C43	1-163-038-91	CERAMIC	100000PF		25V	
C44	1-163-031-11	CERAMIC	10000PF		50V	
C45	1-163-038-91	CERAMIC	100000PF		25V	
C46	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V	
C47	1-126-967-11	ELECT	47uF	20%	16V	
C48	1-163-031-11	CERAMIC	10000PF		50V	
C49	1-126-959-11	ELECT	0.47uF	20%	50V	
C50	1-126-960-11	ELECT	1.0uF	20%	50V	
C51	1-126-960-11	ELECT	1.0uF	20%	50V	
C52	1-126-963-11	ELECT	4.7uF	20%	50V	
C53	1-126-964-11	ELECT	10uF	20%	50V	
C54	1-104-396-11	ELECT	10uF	20%	16V	
C55	1-104-396-11	ELECT	10uF	20%	16V	
C56	1-104-396-11	ELECT	10uF	20%	16V	
C57	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C58	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C59	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V	(AEP, UK, G ,AED)
C59	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	(EE, CIS)
C60	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V	(AEP, UK, G, AED)
C60	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	(EE, CIS)
C61	1-126-301-11	ELECT	1uF	20%	50V	
C62	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C63	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C64	1-126-967-11	ELECT	47uF	20%	16V	
C65	1-163-031-11	CERAMIC	10000PF		50V	
C66	1-126-162-11	ELECT	3.3uF	20%	50V	
C67	1-126-933-11	ELECT	100uF	20%	10V	

TCB

Ref. No.	Part No.	Description				Remark
C68	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C71	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C72	1-126-967-11	ELECT	47uF	20%	16V	
C120	1-163-105-00	CERAMIC CHIP	33PF	5%	50V	(AEP, UK, G, AED)
C1701	1-162-294-31	CERAMIC	0.001uF	10%	50V	(EE, CIS)
C1702	1-130-014-00	PP FILM	470PF	5%	16V	(EE, CIS)
C1703	1-126-959-11	ELECT	0.47uF	20%	50V	(EE, CIS)
C1704	1-126-959-11	ELECT	0.47uF	20%	50V	(EE, CIS)
C1705	1-163-035-00	CERAMIC CHIP	0.047uF		50V	(EE, CIS)
C1706	1-126-960-11	ELECT	1.0uF	20%	50V	(EE, CIS)
C1707	1-163-129-00	CERAMIC CHIP	330P	5%	50V	(EE, CIS)
C1710	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	(EE, CIS)
C1711	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	(EE, CIS)
C1712	1-130-736-11	PP FILM	0.01uF	5%	16V	(EE, CIS)
C1713	1-130-736-11	PP FILM	0.01uF	5%	16V	(EE, CIS)
C1714	1-126-960-11	ELECT	1.0uF	20%	50V	(EE, CIS)
C1715	1-126-960-11	ELECT	1.0uF	20%	50V	(EE, CIS)
C1716	1-126-960-11	ELECT	1.0uF	20%	50V	(EE, CIS)
C1719	1-126-967-11	ELECT	47uF	20%	16V	(EE, CIS)
C1720	1-163-031-11	CERAMIC CHIP	0.01uF		50V	(EE, CIS)
C1723	1-163-031-11	CERAMIC CHIP	0.01uF		50V	(EE, CIS)
C1724	1-163-031-11	CERAMIC CHIP	0.01uF		50V	(EE, CIS)
C1725	1-126-967-11	ELECT	47uF	20%	16V	(EE, CIS)
C1726	1-126-960-11	ELECT	1.0uF	20%	50V	(EE, CIS)
C1727	1-126-960-11	ELECT	1.0uF	20%	50V	(EE, CIS)
C1728	1-126-966-11	ELECT	33uF	20%	16V	(EE, CIS)
CT1701	1-141-444-11	CAP, CERAMIC TRIMMER			50PF	(EE, CIS)
		< CERAMIC FILTER >				
CF1	1-567-389-11	FILTER, CERAMIC				
CF2	1-760-393-11	FILTER, CERAMIC (AEP, UK, G, AED)				
CF3	1-760-393-11	FILTER, CERAMIC				

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN1	1-568-834-11	SOCKET, CONNECTOR 15P	
		< DIODE >	
D21	8-719-976-99	DIODE UDZ-TE-17-5.1B	
D41	8-719-016-74	DIODE 1SS352-TPH3	
D42	8-719-016-74	DIODE 1SS352-TPH3 (EE, CIS)	
D43	8-719-016-74	DIODE 1SS352-TPH3 (EE, CIS)	
D1701	8-719-016-74	DIODE 1SS352-TPH3 (EE, CIS)	
D1702	8-719-016-74	DIODE 1SS352-TPH3 (EE, CIS)	
D1703	8-719-987-63	DIODE 1N4148M-TA (EE, CIS)	
D1704	8-719-016-74	DIODE 1SS352-TPH3 (EE, CIS)	
		< FRONTEND >	
FE1	1-693-357-11	FRONT END (4 GANG) (AEP, UK, G, AED)	
FE1	1-693-335-11	FRONT END (3 GANG) (EE, CIS)	
FE2	1-233-514-11	ENCAPSULATED COMPONENT	
		< IC >	
IC21	8-759-288-54	IC LC72130	
IC41	8-759-176-03	IC LA1835	
IC1701	8-759-063-04	IC IR3R42 (EE, CIS)	
IC1702	8-759-140-53	IC MC14053BCP (EE, CIS)	
		< IFT >	
IFT41	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)	
		< CHIP CONDUCTOR >	
JR2	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR6	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR8	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR9	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR45	1-216-295-00	CONDUCTOR, CHIP (2012) (AEP, UK, G, AED)	
JR46	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR47	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR48	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR49	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR51	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR52	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR53	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR54	1-216-295-00	CONDUCTOR, CHIP (2012)	
JR1701	1-216-295-00	CONDUCTOR, CHIP (2012) (EE, CIS)	
JR1702	1-216-295-00	CONDUCTOR, CHIP (2012) (EE, CIS)	
JR1703	1-216-295-00	CONDUCTOR, CHIP (2012) (EE, CIS)	
JR1704	1-216-295-00	CONDUCTOR, CHIP (2012) (EE, CIS)	
JR1705	1-216-295-00	CONDUCTOR, CHIP (2012) (EE, CIS)	

Ref. No.	Part No.	Description				Remark
		< JUMPER RESISTOR >				
JW4	1-249-413-11	CARBON	470	5%	1/4W	(AEP, UK, G, AED)
JW5	1-249-413-11	CARBON	470	5%	1/4W	(AEP, UK, G, AED)
		< INDUCTOR >				
L2	1-414-142-11	INDUCTOR, MICRO 1uH (AEP, UK, G, AED)				
L3	1-410-521-11	INDUCTOR, MICRO 100uH				
L4	1-410-515-11	INDUCTOR, MICRO 33uH (AEP, UK, G, AED)				
L41	1-407-500-00	MICRO INDUCTOR 4.7mH				
L1701	1-409-497-11	COIL (FILTER) (EE, CIS)				
		< LOW PASS FILTER >				
LPF41	1-239-845-11	FILTER, LOW PASS				
LPF42	1-239-845-11	FILTER, LOW PASS				
		< TRANSISTOR >				
Q1	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L				
Q2	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L				
Q3	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L				
Q4	8-729-201-27	TRANSISTOR 2SC2715Y-TE85L				
Q5	8-729-424-08	TRANSISTOR MUN2111T1				
Q9	8-729-216-22	TRANSISTOR 2SA812-T1-M5M6				
Q11	8-729-421-22	TRANSISTOR MUN2211T1				
Q12	8-729-421-22	TRANSISTOR MUN2211T1				
Q13	8-729-421-22	TRANSISTOR MUN2211T1				
Q14	8-729-421-22	TRANSISTOR MUN2211T1				
Q1701	8-729-424-08	TRANSISTOR MUN2111T1 (EE, CIS)				
Q1702	8-729-907-00	TRANSISTOR RT1N141M-TP-1 (EE, CIS)				
Q1703	8-729-421-22	TRANSISTOR MUN2211T1 (EE, CIS)				
		< RESISTOR >				
R1	1-249-401-11	CARBON	47	5%	1/4W	
R2	1-216-037-00	METAL CHIP	330	5%	1/10W	
R3	1-216-037-00	METAL CHIP	330	5%	1/10W	
R5	1-216-037-00	METAL CHIP	330	5%	1/10W	
R6	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R7	1-216-037-00	METAL CHIP	330	5%	1/10W	
R8	1-216-037-00	METAL CHIP	330	5%	1/10W	
R9	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R10	1-216-037-00	METAL CHIP	330	5%	1/10W	
R11	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R12	1-216-037-00	METAL CHIP	330	5%	1/10W	
R13	1-216-037-00	METAL CHIP	330	5%	1/10W	
R14	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R19	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R21	1-216-049-91	CHIP	1K	5%	1/10W	(AEP, UK, G, AED)
R21	1-249-417-11	CARBON	1K	5%	1/4W	(EE, CIS)
R22	1-216-049-91	CHIP	1K	5%	1/10W	(AEP, UK, G, AED)
R22	1-249-417-11	CARBON	1K	5%	1/4W	(EE, CIS)
R23	1-216-049-91	CHIP	1K	5%	1/10W	(AEP, UK, G, AED)
R23	1-249-417-11	CARBON	1K	5%	1/4W	(EE, CIS)
R24	1-216-025-91	CHIP	100	5%	1/10W	
R25	1-249-417-11	CARBON	1K	5%	1/4W	
R26	1-249-437-11	CARBON	47K	5%	1/4W	
R27	1-249-417-11	CARBON	1K	5%	1/4W	(AEP, UK, G, AED)
R27	1-249-429-11	CARBON	10K	5%	1/4W	(EE, CIS)
R28	1-249-417-11	CARBON	1K	5%	1/4W	
R29	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R30	1-216-186-00	CHIP	330	5%	1/8W	
R31	1-216-025-91	CHIP	100	5%	1/10W	
R32	1-249-425-11	CARBON	4.7K	5%	1/4W	
R33	1-249-425-11	CARBON	4.7K	5%	1/4W	
R34	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R35	1-216-214-00	CHIP	4.7K	5%	1/8W	
R36	1-216-025-91	CHIP	100	5%	1/10W	
R37	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R38	1-216-089-91	CHIP	47K	5%	1/10W	
R39	1-249-429-11	CARBON	10K	5%	1/4W	
R42	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R43	1-216-042-00	METAL CHIP	510	5%	1/10W	
R44	1-216-013-00	METAL CHIP	33	5%	1/10W	
R45	1-247-843-11	CARBON (SMALL)	3.3K	5%	1/4W	
R46	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R47	1-216-097-91	CHIP	100K	5%	1/10W	
R48	1-249-417-11	CARBON	1K	5%	1/4W	
R49	1-216-049-91	CHIP	1K	5%	1/10W	
R50	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R51	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R53	1-249-429-11	CARBON	10K	5%	1/4W	
R54	1-249-399-11	CARBON	33	5%	1/4W	(AEP, UK, G, AED)
R55	1-216-162-00	CHIP	33	5%	1/8W	
R56	1-249-393-11	CARBON	10	5%	1/4W	
R91	1-216-295-00	CONDUCTOR, CHIP (2012)				
R92	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R94	1-216-073-00	METAL CHIP	10K	5%	1/10W	(AEP, UK, G, AED)
R99	1-249-399-11	CARBON	33	5%	1/4W	
R1701	1-216-081-00	METAL CHIP	22K	5%	1/10W	(EE, CIS)
R1702	1-216-085-00	METAL CHIP	33K	5%	1/10W	(EE, CIS)

Ref. No.	Part No.	Description			Remark
R1703	1-216-069-00	METAL CHIP	6.8K	5%	1/10W (EE, CIS)
R1704	1-216-075-00	METAL CHIP	12K	5%	1/10W (EE, CIS)
R1705	1-216-049-00	METAL CHIP	1K	5%	1/10W (EE, CIS)
R1706	1-216-049-00	METAL CHIP	1K	5%	1/10W (EE, CIS)
R1707	1-216-097-00	METAL CHIP	100K	5%	1/10W (EE, CIS)
R1708	1-216-095-00	METAL CHIP	82K	5%	1/10W (EE, CIS)
R1709	1-216-089-00	METAL CHIP	47K	5%	1/10W (EE, CIS)
R1710	1-216-073-00	METAL CHIP	10K	5%	1/10W (EE, CIS)
R1711	1-249-429-11	CARBON	10K	5%	1/4W (EE, CIS)
R1714	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (EE, CIS)
R1715	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (EE, CIS)
R1716	1-216-097-91	METAL CHIP	100K	5%	1/10W (EE, CIS)
R1717	1-216-097-91	METAL CHIP	100K	5%	1/10W (EE, CIS)
R1718	1-249-429-11	CARBON	10K	5%	1/4W (EE, CIS)
R1719	1-216-097-91	METAL CHIP	100K	5%	1/10W (EE, CIS)
R1720	1-249-434-11	CARBON	27K	5%	1/4W (EE, CIS)
R1721	1-216-073-00	METAL CHIP	10K	5%	1/10W (EE, CIS)
		< VARIABLE RESISTOR >			
RV41	1-238-601-11	ADJ, CARBON	22K		
RV42	1-238-600-11	ADJ, CARBON	10K		
		< TERMINAL >			
TM1	1-537-488-11	TERMINAL BOARD (ANT)			
		< VIBRATOR >			
X21	1-760-549-31	VIBRATOR, CRYSTAL (4.5MHz)			
X41	1-760-220-11	FILTER, CERAMIC			
X42	1-527-981-00	FILTER, CERAMIC			
X43	1-577-075-21	OSCILLATOR, CERAMIC			
**********					
*	1-664-004-11	TRANS BOARD			
		**********			
	1-533-217-31	HOLDER, FUSE			

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
* CN901	1-564-522-11	PLUG, CONNECTOR 7P			
* CN902	1-564-518-11	PLUG, CONNECTOR 3P			
CN903	1-774-108-11	PIN, CONNECTOR (PC BOARD)			
		< FUSE >			
⚠F903	1-532-299-00	FUSE, TIME-LAG (5A, 250V)			
⚠F904	1-532-299-00	FUSE, TIME-LAG (5A, 250V)			
		< FUSE HOLDER >			
FH903	1-533-217-31	HOLDER, FUSE			
FH904	1-533-217-31	HOLDER, FUSE			
FH953	1-533-217-31	HOLDER, FUSE			
FH953	1-533-217-31	HOLDER, FUSE			
		< RESISTOR >			
⚠R901	1-219-121-11	FUSIBLE	0.22	5% 1/4W F	
⚠R902	1-219-121-11	FUSIBLE	0.22	5% 1/4W F	
⚠R903	1-219-121-11	FUSIBLE	0.22	5% 1/4W F	
⚠R904	1-219-121-11	FUSIBLE	0.22	5% 1/4W F	
		< TRANSFORMER >			
⚠T901	1-431-147-11	TRANSFORMER, POWER			
**********					
		MISCELLANEOUS			
		**********			
14	1-773-160-11	WIRE (FLAT TYPE) (21 CORE)			
15	1-769-947-11	WIRE (FLAT TYPE) (11 CORE)			
64	1-777-869-11	WIRE (FLAT TYPE) (10 CORE)			
65	1-777-936-11	WIRE (FLAT TYPE) (5 CORE)			
66	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)			
74	1-769-909-11	WIRE (FLAT TYPE) (9 CORE)			
⚠103	1-751-529-11	CORD, POWER (UK)			
104	1-777-870-11	WIRE (FLAT TYPE) (19 CORE)			
108	1-773-012-11	WIRE (FLAT TYPE) (15 CORE)			
⚠113	1-575-651-21	CORD, POWER (AEP, AED, EE, CIS, G)			
257	1-452-538-11	MAGNET			
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)			
⚠301	8-820-020-01	OPTICAL PICK-UP KSS-213D/Q-NP			
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)			
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK A)			
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK B)			
M1	X-3371-223-1	MOTOR ASSY, CAPSTAN			
M101	X-4917-523-4	MOTOR ASSY, SPIMDLE			
M102	X-4917-504-1	MOTOR ASSY, SLED			
M2	A-2004-410-A	MOTOR ASSY, DC (TRIGGER)			
M701	A-4672-004-A	MOTOR ASSY (TURN)			
M801	A-4672-004-A	MOTOR ASSY (SLED)			
S811	1-473-335-11	ENCODER, ROTARY (BU, TRAY ADDRESS DET)			
⚠T901	1-431-147-11	TRANSFORMER, POWER			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-871-01	SCREW +BVTT 3X6 (S)	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#5	7-621-775-10	SCREW +B 2.6X4	
#6	7-621-255-15	SCREW +P 2X3	
#7	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#8	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
#9	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
#10	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#11	7-623-921-01	RING, RETAINING, CAPSTAN	
#12	7-621-775-00	SCREW +B 2.6X3	
#13	7-685-872-09	SCREW +BVTT 3X8 (S)	

9-960-882-11

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Home A&V Products Company

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HCD-RX80

SONY

AEP Model
UK Model

SERVICE MANUAL

CORRECTION-1

Correct your service manual as shown below.

Subject: CORRECTION OF FRONT PANEL SECTION

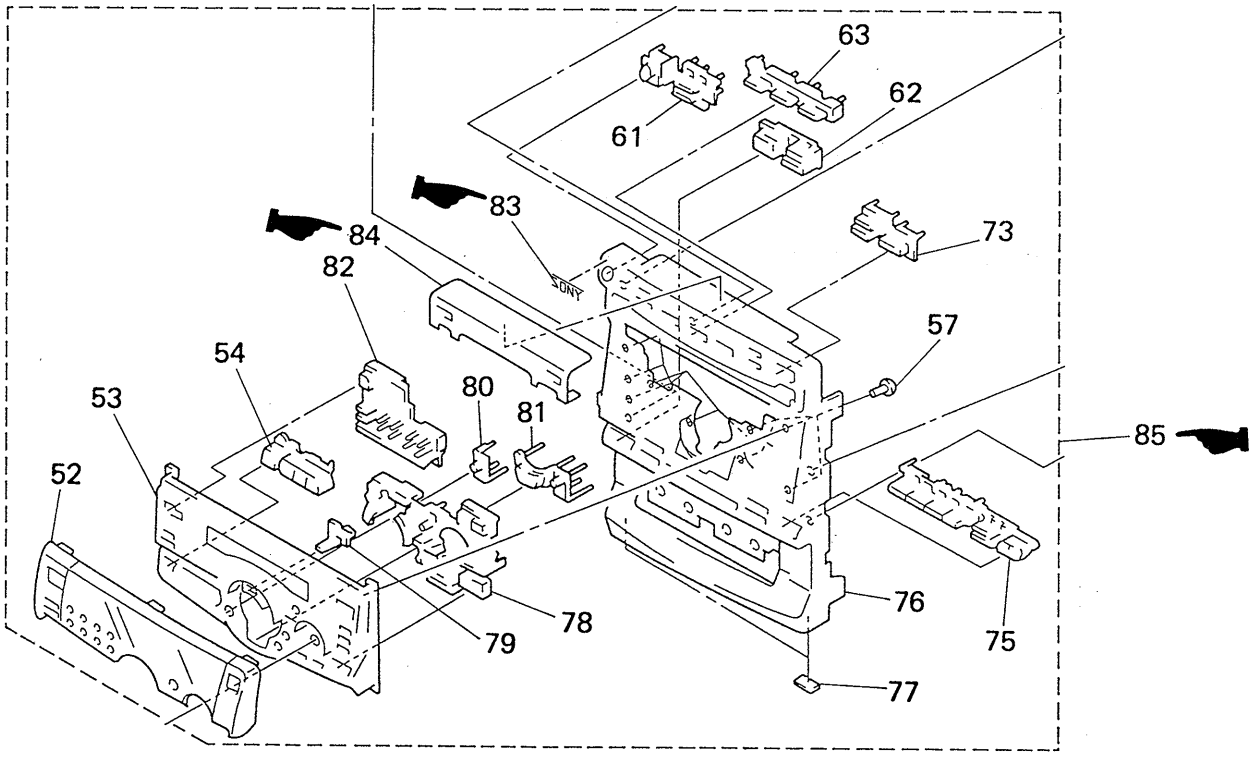
(SPM-97002)

NOTE:

- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- The mechanical parts with no reference number in the exploded views are not supplied.

(2) FRONT PANEL SECTION (Service manual page 87)

☛ : Indicates corrected portion.



Ref. No.	INCORRECT	CORRECT
	Part No. Description	Part No. Description
76	4-986-856-01 PANEL, FRONT (BLACK) (EXCEPT EE, CIS) 4-986-856-21 PANEL, FRONT (METALLIC) (EE, CIS)	4-986-856-01 PANEL, FRONT (BLACK)
83	———	4-962-708-11 EMBLEM (4-A), SONY
84	———	4-986-859-31 WINDOW (CD)
85	———	X-4948-104-1 PANEL ASSY, FRONT (METALLIC)

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